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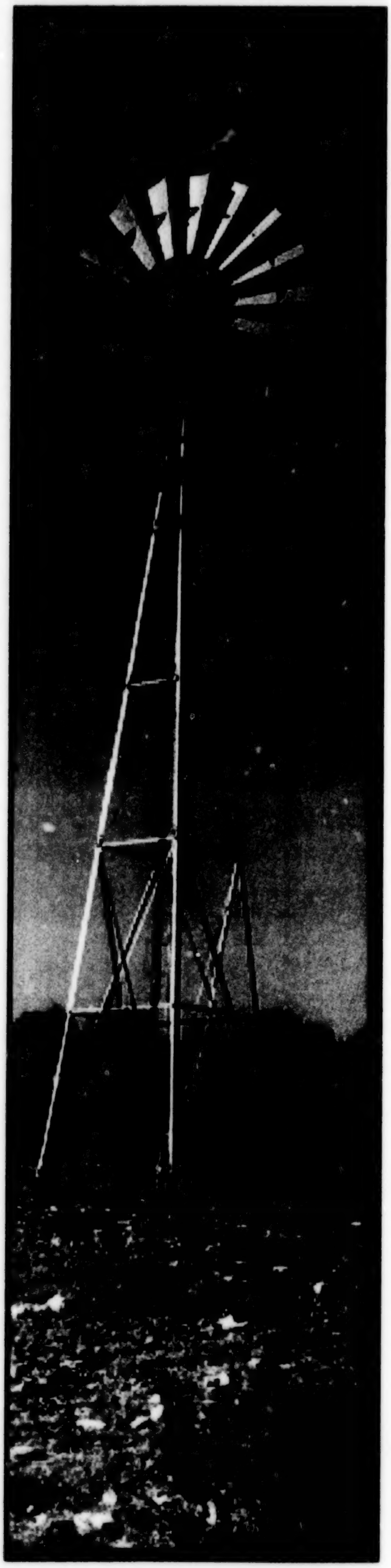


SAN FELIPE PUEBLO/
Bureau of Land Management

PROPOSED LAND EXCHANGE

Draft
Environmental Impact Statement

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Albuquerque Field Office
Albuquerque, New Mexico

2001-011920/NF

C

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Albuquerque Field Office
435 Montaño Rd. N.E.
Albuquerque, New Mexico 87107- 4935
www.nm.blm.gov

IN REPLY REFER TO
NMNM 101522
2200 (010)

April, 2001

Dear Reader:

Enclosed for your review and comment is the Draft Environmental Impact Statement (DEIS) for the Bureau of Land Management/San Felipe Pueblo Land Exchange. This DEIS analyzes three alternatives for the exchange of lands owned by the Bureau of Land Management (BLM) and private lands, to be identified, from BLM's high priority acquisition areas. Your careful review and comments are needed at this time to ensure that your concerns have been considered in the exchange process.

Please direct your comments to the Albuquerque Field Manager, Edwin Singleton, at the above address. This document is subject to a 45 day review period. Written comments must be postmarked no later than June 5, 2001. Also use this address when requesting further information on materials referenced in the DEIS.

Comments on the alternatives and the adequacy of the impact analysis are most useful when they address one or more of the following:

- Errors in the analysis,
- New information that would have a bearing on the analysis,
- Misinformation that could affect the outcome of the analysis,
- Requests for clarification,
- A substantive new alternative whose mix of all allocations differ from any of the existing alternatives.

Where possible, refer to the pages and paragraphs on which you are commenting.

An open house will be held from 4:00 p.m. to 7:00 p.m. on May 10, 2001, at the following location:

Bureau of Land Management
Main Conference Room
435 Montano NE
Albuquerque, NM 87107

You will be able to view maps on the proposed exchange, submit comments, and talk to representatives from the BLM and the Pueblo of San Felipe. Written comments will be fully considered and evaluated during preparation of the Final EIS.

Sincerely,

Edwin J. Singleton

Edwin J. Singleton
Field Manager

SAN FELIPE PUEBLO/
BUREAU OF LAND MANAGEMENT
PROPOSED LAND EXCHANGE

DRAFT ENVIRONMENTAL IMPACT STATEMENT

April 2001

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ALBUQUERQUE FIELD OFFICE
ALBUQUERQUE, NEW MEXICO

BLM/NM/PL-01-003-7122

Environmental Impact Statement for the Proposed BLM/San Felipe Land Exchange

Draft [X]   Final [ ]

United States Department of the Interior, Bureau of Land Management

1. Type of Action: Administrative [X]   Legislative [ ]

2. This Draft Environmental Impact Statement describes and analyzes three alternatives for a land exchange in Sandoval and Santa Fe Counties, New Mexico involving public land south of County Road 252 A (formerly State Road 22) and east of the Tejon Grant and private lands of equal value, yet to be acquired by the Pueblo, within high priority acquisition areas (as identified in the Rio Puerco and the Taos Resource Management Plans [RMPs]). The alternatives are: (A) Proposed Action (exchange of approximately 9,460 acres of public lands with restrictive covenants), (B) Exchange of the proposed action acreage plus an additional 1,447 acres of public lands with restrictive covenants, and (C) No Action Alternative (the exchange proposal would be rejected).

3. Comments have been requested from the individuals, groups and agencies shown on the distribution list in Chapter 5.

4. For further information, contact:

   Debby Lucero
   Realty Specialist
   Bureau of Land Management
   435 Montano Road NE
   Albuquerque, New Mexico 87107

5. Date Draft Filed with Environmental Protection Agency: April 20, 2001

6. Comments on the Draft must be postmarked no later than: June 5, 2001

APPROVED:

Edwin J. Singleton

Edwin J. Singleton
Manager, Albuquerque Field Office

TABLE OF CONTENTS

Summary Table--Comparison of Alternatives S-1

Chapter 1--Purpose and Need 1-1
- Introduction 1-1
- Need for the Proposed Action 1-1
- Conformance with Land Use Plans 1-1

Chapter 2--Proposed Action and Alternatives 2-1
- Alternative A (Proposed Action Alternative) 2-1
- Alternative B (Additional Lands) 2-2
- Alternative C (No Action) 2-2
- Alternatives Considered but Dropped from Further Analysis 2-2
- Map 1 - San Felipe Exchange Selected Lands 2-4
- Map 2 - Right-of-Way Corridor #2 2-5
- Map 3 - Landowner Access Roads Identified on Public Lands 2-6
- Map 4a - Area of Land Identified for Acquisition (Upper Rio Puerco, AFO) 2-7
- Map 4b - Area of Lands Identified for Acquisition (Petaca Pinta, AFO) 2-8
- Map 4c - Area of Land Identified for Acquisition (El Malpais, AFO) 2-9
- Map 4d - Lands Identified for Acquisition (Taos Field Office) 2-10
- Map 4e - Map Locations 2-11
- Map 5 - Landownership With/Without San Felipe/Private Exchange 2-12

Chapter 3--Affected Environment 3-1
- Introduction 3-1
- San Felipe Pueblo Setting 3-1
- Regional Setting 3-1
  - Selected Lands 3-1
  - Offered Lands 3-1
- Natural Environment 3-2
  - Ecological Sites/Vegetation–Selected Lands 3-2
  - Threatened, Endangered and Other Special Status Species–Selected and Offered Lands 3-2
  - Water Resources–Selected Lands 3-4
  - Water Resources–Offered Lands 3-5
  - Wildlife–Selected Lands 3-5
  - Wildlife–Offered Lands 3-5
  - Geology/Paleontology–Selected Lands 3-5
  - Geology/Paleontology–Offered Lands 3-6
  - Minerals–Selected Lands 3-6
  - Minerals–Offered Lands 3-7
  - Land Uses–Selected Lands 3-7
  - Land Uses–Offered Lands 3-8
  - Wilderness–Selected Lands 3-8
  - Wilderness–Offered Lands 3-8
  - Recreation–Selected Lands 3-8
  - Recreation–Offered Lands 3-9
  - Visual Resources–Selected and Offered Lands 3-9
  - Hazardous Materials–Selected Lands 3-9
  - Hazardous Materials–Offered Lands 3-10
  - Cultural Resources–Selected Lands 3-10
  - Cultural Resources–Offered Lands 3-10
  - American Indian Uses–Selected Lands 3-11
  - American Indian Uses–Offered Lands 3-11
  - Socio-Economic Conditions–Selected and Offered Lands 3-13

Chapter 4--Environmental Consequences 4-1

- Introduction 4-1
- General Assumptions and Guidelines 4-1
- Laws and Explanation of Proposed Land Exchange Process 4-1

Detailed Impact Analysis by Resource . . . 4-2
  Impacts to Ecological Sites/Vegetation(Selected and Offered Lands) . . . 4-2
  Impacts To Threatened, Endangered and Other Special Status Species (Selected and Offered Lands) . . . 4-2
  Impacts to Water Resources (Selected and Offered Lands) . . . 4-2
  Impacts to Wildlife (Selected Lands) . . . 4-3
  Impacts to Wildlife (Offered Lands) . . . 4-3
  Impacts to Geology & Paleontology (Selected Lands) . . . 4-3
  Impacts to Geology & Paleontology (Offered Lands) . . . 4-3
  Impacts to Mineral Resources (Selected Lands) . . . 4-3
  Impacts to Mineral Resources (Offered Lands) . . . 4-3
  Impacts to Land Uses (Selected Lands) . . . 4-4
  Impacts to Land Uses--(Offered Lands) . . . 4-4
  Impacts to Wilderness (Selected Lands) . . . 4-5
  Impacts to Wilderness (Offered Lands) . . . 4-5
  Impacts to Recreation (Selected Lands) . . . 4-5
  Impacts to Recreation (Offered Lands) . . . 4-5
  Impacts to Visual Resources (Selected Lands) . . . 4-5
  Impacts to Visual Resources (Offered Lands) . . . 4-5
  Impacts to Hazardous Materials (Selected Lands) . . . 4-6
  Impacts to Hazardous Materials (Offered Lands) . . . 4-6
  Impacts to Cultural Resources (Selected Lands) . . . 4-6
  Impacts to Cultural Resources (Offered Lands) . . . 4-6
  Impacts to American Indian Uses (Selected Lands) . . . 4-6
  Impacts to American Indian Uses (Offered Lands) . . . 4-7
  Impacts to Rangeland Management (Selected Lands) . . . 4-7
  Impacts to Rangeland Management (Offered Lands) . . . 4-7
  Impacts to Socio-Economic Conditions (Selected Lands) . . . 4-8
  Impacts to Socio-Economic Conditions (Offered Lands) . . . 4-8
Impacts of Alternative B (Additional Acreage) . . . 4-8
  Impacts to Ecological Sites/Vegetation (Selected and Offered Lands) . . . 4-8
  Impacts to Threatened, Endangered and Other Special Status Species (Selected and Offered Lands) . . . 4-9
  Impacts to Water Resources (Selected and Offered Lands) . . . 4-9
  Impacts to Wildlife (Selected Lands) . . . 4-9
  Impacts to Wildlife (Offered Lands) . . . 4-10
  Impacts to Geology & Paleontology (Selected and Offered Lands) . . . 4-10
  Impacts to Mineral Resources (Selected Lands) . . . 4-10
  Impacts to Mineral Resources (Offered Lands) . . . 4-10
  Impacts to Land Uses (Selected Lands) . . . 4-10
  Impacts to Land Uses-(Offered Lands) . . . 4-11
  Impacts to Wilderness (Selected and Offered Lands) . . . 4-11
  Impacts to Recreation (Selected Lands) . . . 4-11
  Impacts to Recreation (Offered Lands) . . . 4-11
  Impacts to Visual Resources (Selected Lands) . . . 4-12
  Impacts to Visual Resources (Offered Lands) . . . 4-12
  Impacts to Hazardous Materials (Selected Lands) . . . 4-12
  Impacts to Hazardous Materials (Offered Lands) . . . 4-12
  Impacts to Cultural Resources (Selected Lands) . . . 4-12
  Impacts to Cultural Resources (Offered Lands) . . . 4-12
  Impacts to American Indian Uses (Selected Lands) . . . 4-12
  Impacts to American Indian Uses (Offered Lands) . . . 4-13
  Impacts to Rangeland Management (Selected Lands) . . . 4-13
  Impacts to Rangeland Management (Offered Lands) . . . 4-13
  Impacts to Socio-economic Conditions (Selected Lands) . . . 4-13
  Impacts to Socio-economic Conditions (Offered Lands) . . . 4-14
Impacts of the No Action Alternative (Selected and Offered Lands) . . . 4-14
  Impacts to Ecological Sites/Vegetation . . . 4-14
  Impacts toThreatened, Endangered and Other Special Status Species . . . 4-14
  Impacts to Water Resources . . . 4-14
  Impacts to Wildlife . . . 4-14
  Impacts to Geology/Minerals/Paleontology . . . 4-14
  Impacts to Land Uses . . . 4-15
  Impacts to Wilderness . . . 4-15

Impacts to Recreation 4-15
Impacts to Visual Resources 4-15
Impacts to Hazardous Materials 4-15
Impacts to Cultural Resources (Selected Lands) 4-15
Impacts to Cultural Resources (Offered Lands) 4-15
Impacts to American Indian Uses (Selected Lands) 4-15
Impacts to American Indian Uses (Offered Lands) 4-16
Impacts to Rangeland Management (Selected Lands) 4-16
Impacts to Socio-Economic Conditions (Selected and Offered Lands) 4-16
Cumulative Impacts (Selected Lands) 4-17
Impacts to Recreation 4-17
Impacts to Visual Resources 4-18
Impacts to Socio-Economic Conditions 4-18
Impacts to Environmental Justice 4-18
Cumulative Impacts (Offered Lands) 4-18

Chapter 5--Consultation and Coordination 5-1
Introduction 5-1
Consultation Regarding Wildlife 5-1
Consistency with Other Plans 5-1
Persons and Agencies Consulted (Public Participation) 5-1

Appendix A--Mission of the Bureau of Land Management A-1

Appendix B--Acronyms B-2

Appendix C--Major Laws and Regulations Governing Proposed Land Exchange Area DEIS C-1

Appendix D--Biological Evaluation for San Felipe Land Exchange D-1

Appendix E--Hydrogeologic Setting of Proposed Federal Land Exchange Area E-1

Appendix F--Glossary of Terms F-1

Appendix G--Mailing List G-1

Appendix H--San Felipe Land Exchange NMNM 101522 Selected Lands -Legal Land Description H-1

Appendix I--Selected Land Reservations I-1
Restrictive Covenants I-3

Appendix J--References Cited J-1

SUMMARY TABLE

COMPARISON OF IMPACTS OF ALTERNATIVES *

Element/Resource	Proposed Action	Alternative B (No Conservation Easement)	No Action Alternative
Land Selected Land Federal Disposal (acres)	9,460- with restrictive covenants	10,907- with restrictive covenants	0 acres- no exchange
Offered Land Federal Acquisition	-acreage, yet to be determined. -equal value based on fair market value within high priority acquisition areas	-acreage, yet to be determined. -equal value based on fair market value within high priority acquisition areas	0 acres- no exchange
Ecological Sites/Vegetation			
acreage maintained	9,460 acres	10,907 acres	unknown acres
acreage disturbed	0 acres	0 acres	unknown acres
Threatened, Endangered and other Special Status Species	No Effect	No Effect	No Effect
Water Resources water use	livestock	livestock	livestock and probably some mining
quality	Minimal erosion impact with high intensity storm. Low level silt loading.	Minimal erosion impact with high intensity storm. Low level silt loading.	Minimal erosion impact with high intensity storm. Low level silt loading.
Wildlife Habitat	Habitat primarily for non-game species	Habitat primarily for non-game species	Habitat primarily for non-game species
Geology & Paleontology	no impacts identified	no impacts identified	no impacts identified
Mineral Resources cubic yards of sand and gravel accessible for development	0- million	0- million	38 million
cubic yards of sand and gravel not accessible due to restrictive covenants	38 million	38 million	0

Summary Table (Con't)

Element/Resource	Proposed Action	Alternative B (No Conservation Easement)	No Action Alternative
Land Uses			
acreage available for general public access and use	0	0	10,907 acres
acreage available for lease under the R&PP Act.	0	0	10,907 acres
acreage available for livestock grazing	9,460 acres	10,907 acres	10,907 acres
acreage available for right-of-way use under Tribal and restrictive covenant conditions	9,460 acres	10,907 acres	0
acreage available for right-of-way use under Federal regulations	0	0	10,907 acres
Wilderness			
acres of wilderness or WSA	0	0	0
Recreation			
available for non-commercial, non-competitive and non-organized activities to general public	1,447 acres	0 acres	10,907 acres
available for multiple recreational use to Pueblo membership	10,907 acres	10,907 acres	10,907 acres
Visual Resources			
acres with Visual Resource Management Classification (VRM)	0	0	9,460 acres
unclassified	10,907 acres	10,907 acres	0
Hazardous Materials Impacts	none	none	none

Summary Table (Con't)

Element/Resource	Proposed Action	Alternative B (No Conservation Easement)	No Action Alternative
American Indian Uses			
privacy assured by Pueblo control	9,460 acres	10,907 acres	0 acres
Rangeland Management			
current permittee use in AUM's	0	0	3,240 AUM's
Socio Economic Impacts			
Tribal control for privacy for traditional cultural use	9,460 acres	10,907 acres	0
loss of free general public use	9,460 acres	10,907 acres	0
Environmental Justice	Would positively affect San Felipe Pueblo a minority and low income group.	Would positively affect San Felipe Pueblo a minority and low income group.	San Felipe Pueblo a minority and low income group would have use of the area resource but would not control the use and conflicts in use of the area would continue.

*** These impacts are primarily related to the Selected Lands.**

9

CHAPTER 1

PURPOSE AND NEED

INTRODUCTION

The Albuquerque Field Office of the Bureau of Land Management (BLM) is proposing to exchange approximately 9,460 acres of public land in Sandoval and Santa Fe Counties for private lands of equal value. The proposed action is a land exchange between the BLM and the Pueblo of San Felipe. The proposed exchange would occur under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA), as amended by the Federal Land Exchange Facilitation Act of August 20, 1988 (FLEFA). (See Appendix C for summaries of these laws.)

The proposed action involves the BLM exchanging approximately 9,460 acres of Federal surface and subsurface estate south of County Road 252A (formerly State Road 22) and northeast of the Tejon Grant (see Map 1) to the San Felipe Pueblo. The Pueblo in turn would transfer to the BLM private lands of equal value yet to be acquired by them. The selected lands would then be transferred in Fee to the Pueblo and eventually would become lands managed by the Bureau of Indian Affairs in trust for the San Felipe Pueblo. Restrictive covenants (see Appendix I) would be retained by the BLM on all the selected lands except for approximately 1,400 acres. (See further detail on Chapter 2 Alternative A).

For purposes of this Draft Environmental Impact Statement (DEIS), Federal lands selected for acquisition by the Pueblo are called "Selected Lands." Private lands are called "Offered Lands" where we refer to lands to be offered by the Pueblo to BLM in exchange for the Selected Lands. The proposed exchange is explained in more detail in Chapter 2 (Proposed Action and Alternatives).

The BLM has developed this DEIS to address the probable environmental impacts that would happen if this exchange were to occur.

NEED FOR THE PROPOSED ACTION

The Selected Lands that would leave Federal ownership are administered by BLM's Albuquerque Field Office. The lands to be acquired by the Federal government will be under the jurisdiction of the Albuquerque and/or Taos Field Offices.

Completion of the proposed exchange would enhance the BLM land ownership consolidation in this area of New Mexico. The exchange would also help reduce conflicts between public land users and private landowners, eliminate inappropriate development of private inholdings in specially designated areas, and would increase BLM's management flexibility. In addition, the San Felipe Pueblo would acquire lands that have been identified as having significant traditional cultural values to them.

CONFORMANCE WITH LAND USE PLANS

Land ownership adjustments were one of the critical issues that drove the preparation of two land use plans for BLM's Albuquerque District: the Rio Puerco Resource Management Plan (RMP; USDI, BLM, 1986) and the Taos RMP (USDI, BLM, 1988b). The Rio Puerco Resource Area and the Taos Resource Area are now separate field offices under the current BLM organization. According to these RMPs, consolidating the public land to improve resource manageability is the highest priority for the Lands and Realty Program in the Albuquerque Field Office. Both the Rio Puerco and Taos RMPs (as amended) identified certain non-public lands within specially managed areas that the BLM would like to acquire to augment various resources programs.

In addition to the guidance outlined in the RMPs, the Statewide Wilderness Final Environmental Impact Statement (USDI, BLM, 1988a) further identified non-public lands within and adjacent to certain

Wilderness Study Areas (WSAs) for future acquisition by the Albuquerque District (now the Albuquerque Field Office). Land ownership adjustments through exchanges are the BLM's preferred method for achieving these objectives.

This proposed action is subject to the Rio Puerco RMP (approved November 1986, maintained and reprinted October 1992) and the Taos RMP (1988). As required by 43 CFR 1610.5, the Proposed Action Alternative of this Draft EIS has been reviewed to ensure that it conforms with the terms and conditions of the RMP's.

The Rio Puerco RMP categorizes lands in three different management classes: (1) Management Class A lands represent the highest priority for BLM retention or acquisition based on natural and cultural resources values and/or opportunities to improve management by consolidating land ownership patterns. (2) Management Class B lands are identified for retention by the BLM. While Class B lands are not a high priority for consolidation, they can be made available for exchange to acquire non-public lands in high priority (Management Class A) retention zones. (3) Public lands identified for disposal are categorized as Management Class C. The Taos RMP does not distinguish between the three management classes; it categorizes lands as either for disposal or retention/acquisition.

Most of the Selected Land is identified as Management Class B. The additional Selected Lands under Alternative B are identified for disposal (Management Class C) in the Rio Puerco RMP.

(All of the documents referenced previously are available for public review at the BLM's Albuquerque Field Office, 435 Montaño NE, Albuquerque, NM.)

CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

ALTERNATIVE A (Proposed Action Alternative)

The proposed action is a land exchange between the BLM's Albuquerque Field Office and the San Felipe Pueblo. The exchange would take place under the authority of the Federal Land Policy and Management Act of 1976 (FLMPA), as amended by the Federal Land Exchange Facilitation Act of August 20, 1988 (FLEFA).

The Proposed Action Alternative involves the BLM exchanging approximately 9,460 acres of Federal surface and subsurface estate south of County Road 252A (formerly State Road 22) and Northeast of Tejon Grant (see map 1) to the San Felipe Pueblo. The San Felipe Pueblo would transfer to the BLM private lands of equal value yet to be acquired by the Pueblo, within high priority acquisition areas with priorities given to ACEC's, WSA's, National Conservation Area (NCA) habitat management and other special management areas as identified in the Rio Puerco and the Taos RMP's.

Approximately 9,460 acres of the Selected Lands would be transferred in fee to the Pueblo and restrictive covenants would be retained by the BLM. The restrictive covenants would be lifted on approximately 1,400 acres if the Pueblo and a private landowner complete an agreement on a land exchange to consolidate ownership within 120 days. The lands acquired by the Pueblo in this private/Pueblo exchange would then become subject to the same restrictive covenants as apply to the Selected Lands in the Pueblo/BLM exchange. The 8,060 acres of the Selected Lands plus the additional private lands acquired by the Pueblo would eventually be managed by the BIA in trust for the benefit of San Felipe Pueblo.

The purpose of the restrictive covenants are to conserve important habitat for wildlife and open space, to conserve the diverse vegetative communities and the wildlife inhabiting these communities, and to preserve the lands in their present condition, but without interfering with any uses of the property by the San Felipe Pueblo consistent with the protection of the conservation values.

The patent transferring the Selected Lands would also contain a reservation protecting historic properties consistent with the National Historic Preservation Act, (P.L. 89-665; 80 Stat. 915; 16 U.S.C. 470; as amended) until the lands are transferred to the United States in trust for the benefit of the San Felipe Pueblo.

Both surface and subsurface estates would be transferred, ensuring that management problems were minimized and a future exchange would not be necessary. A block of Federal lands northwest of the Selected Lands surrounding and including the Ball Ranch ACEC will remain in federal ownership. An approximately 40 foot-wide access road to the Ball Ranch ACEC block will be reserved in federal ownership (see Map 1).

A small portion of a BLM right-of-way corridor crosses through the north end of the Selected Lands approximately one mile in length. The corridor was designated in the resolution of the Rio Puerco RMP Rights-of-Way Corridors Issue as a preferred location for future transmission line placements (See Map 2). The corridor was designed to prevent haphazard right-of-way placement and to reduce adverse environmental impacts. The corridor would be included in the transfer to the San Felipe Pueblo.

The Sandoval County-claimed road, County Road 252A (Formerly State Road 22) within the Selected Lands would be issued a right-of-way prior to the exchange. Most land owners' access would be established through agreements arrived at with the San Felipe Pueblo. Map 3 shows the roads identified by landowners as being historical access roads within the Selected Lands. A landowner within the Ball Ranch ACEC and a landowner with a landlocked parcel will be issued rights-of-way by the BLM and made subject to that right in the patent. A portion of the Selected Lands are currently being analyzed by the New Mexico State Highway Department (NMSHD) to examine the need for a future transportation corridor that would connect State Highway 14 to Interstate 25. If the analysis progresses to the point where a specific right-of-way can be identified and applied for prior to the completion of this exchange, a right-of-way would be considered.

The San Felipe Pueblo would transfer private lands to the BLM which they would purchase within certain blocks of lands identified as high priority acquisition areas. The value of the Offered Lands would equal the value of the Selected Lands described previously. The lands to be purchased by the Pueblo are within areas identified as Management Class A in the Rio Puerco RMP which are the field office highest priority for consolidation of public lands. Other lands identified for possible purchase by the Pueblos are within high priority acquisition areas administered by the Taos Field Office. The Offered Lands that the BLM would acquire within Special Management Areas (SMA's) would become incorporated into the specific specially designated area. Any lands acquired within Wilderness Study Areas (WSA's) would be managed under the Interim Management Policy for Lands Under Wilderness Review (USDI, BLM 1995). Lands acquired within a withdrawal area will be subject to the terms and conditions of that withdrawal. The Offered Lands in other areas would be managed under the principal of multiple use consistent with the RMP. If necessary, additional NEPA analysis would be conducted on the Offered Lands.

The Selected Lands that would leave Federal ownership are mostly in the area administered by the Albuquerque Field Office. The lands to be acquired by the Federal government will be within areas administered by the Albuquerque and/or Taos Field Offices. Completion of the proposed exchange would enhance the BLM land ownership consolidation, as well as reduce conflicts between public land users and private landowners, eliminate inappropriate development of private inholdings in specially designated areas, and increase land management flexibility.

ALTERNATIVE B (Additional Lands)

Alternative B is the same as Alternative A except that an additional 1,447 acres of Federal land which includes about an acre of riparian vegetation along a 1/4 mile of permanent water from Chimal spring would be included to which the same restrictive covenants apply. The spring in Section 21, Township 12 North, Range 6 East and the surrounding 40 acres are a Public Water Reserve under Executive Order 107 issued on April 17, 1926 and would be claimed as a Federal water right by the BLM. The Secretary of the Interior has the authority to revoke that order if the land and spring are transferred out of the Public Domain.

ALTERNATIVE C (No Action)

Under the No Action Alternative, the proposed land exchange would not occur. The BLM would not benefit from consolidation of the public lands in high priority acquisition areas.

Federal grazing allotments and recreation would continue as they are now. There is a possibility that the north end of the Selected Lands would be mined, as opposed to no mining development as restricted in the covenants attached to the land.

ALTERNATIVES CONSIDERED BUT DROPPED FROM FURTHER ANALYSIS

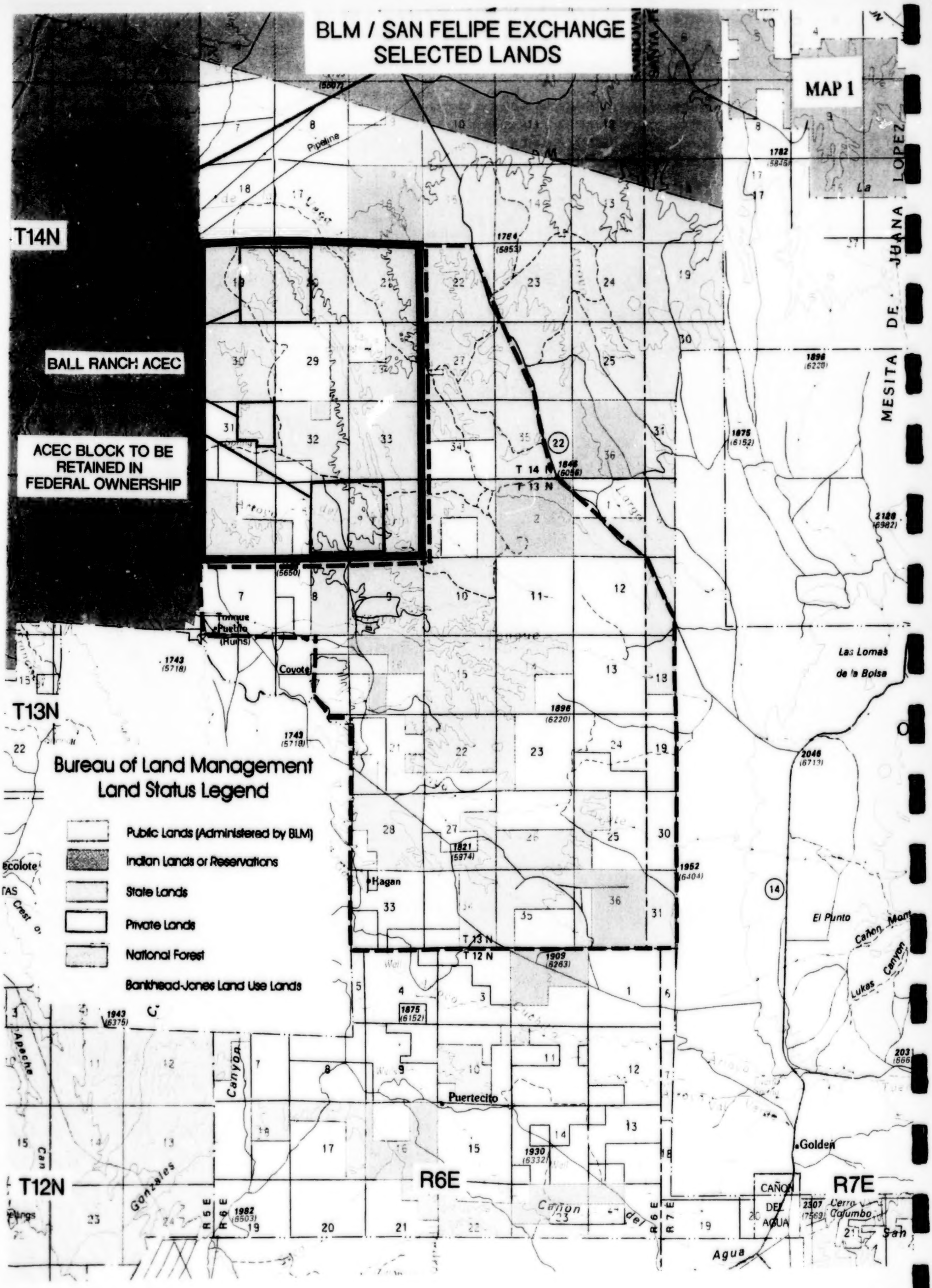
During 1998, a three way land exchange was proposed involving the Santo Domingo Pueblo, San Felipe Pueblo and the State of New Mexico. The exchange involved the Selected Lands and other surrounding public lands as well as State lands within BLM SMA's from a BLM identified list including a parcel within the Petroglyphs National Monument. The exchange was proposed to satisfy the debt owed the State as a result of the Santa Ana land transfer and to consolidate lands in and adjacent to specially managed areas including Petroglyphs National Monument.

The proposed public lands in the exchange considered approximately 18,295.18 acres of Federal surface and subsurface in the area of the Selected Lands. Under this three-way exchange the Ball Ranch

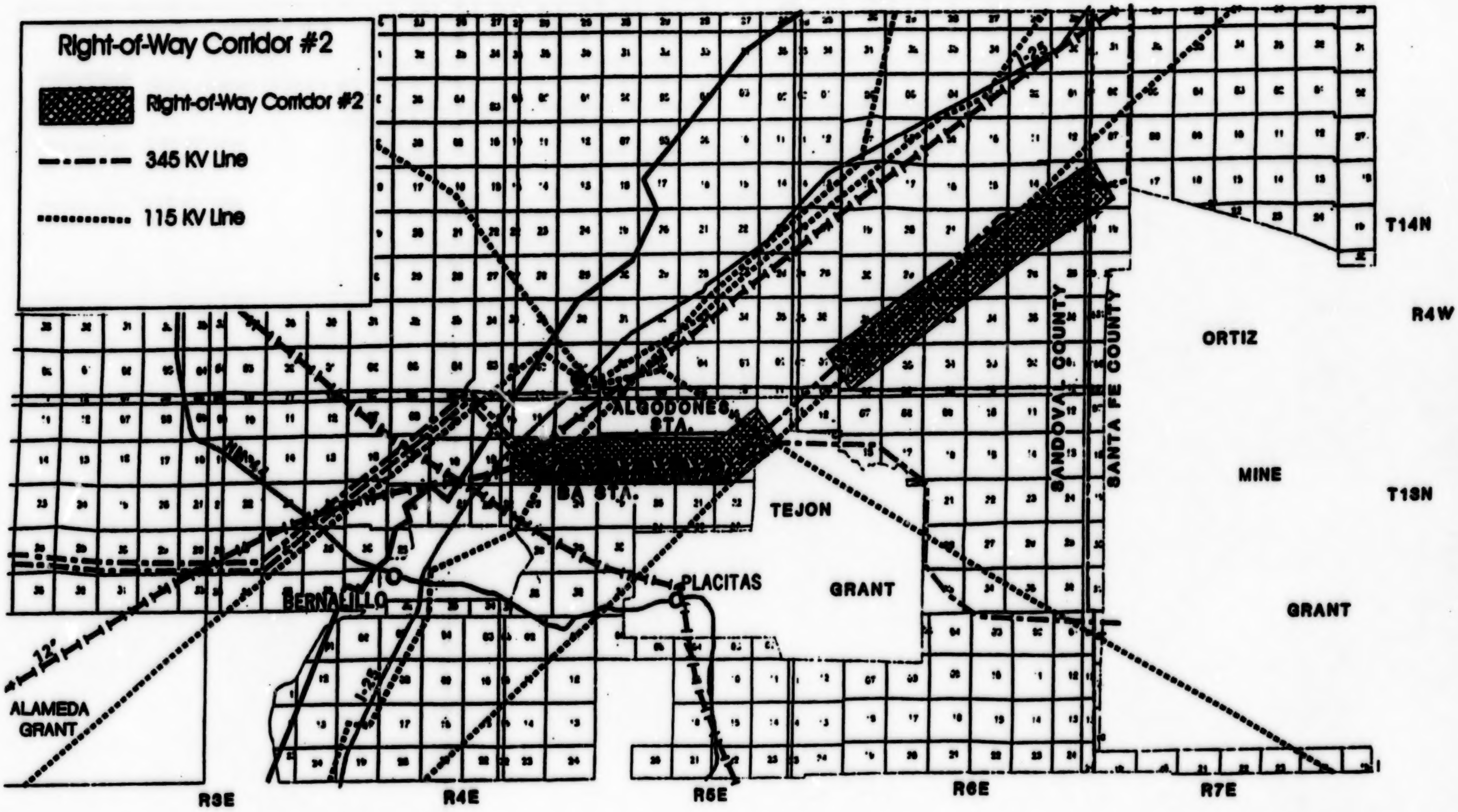
ACEC block would have been retained in Federal ownership. The value of the 18,295.18 acres the BLM proposed to transfer to the Pueblos was to be placed in an escrow account, which would have been used to purchase private or other lands of equal value for transfer to the State. The State would then have transferred scattered State lands of equal value (chosen by the BLM from an identified list) to the BLM.

This proposal was dropped from further consideration after the State Land Office identified other BLM disposal lands that would more prudently help them meet their state trust mission. All parties agreed to drop this proposal from further consideration to propose three separate land exchanges between the respective entities.

BLM / SAN FELIPE EXCHANGE SELECTED LANDS



MAP 2


Right-of-Way Corridor #2
▨ Right-of-Way Corridor #2
345 KV Line
115 KV Line
I-25
ALGODONES STA.
BA STA.
TEJON
GRANT
PLACITAS
BERNALILLO
ALAMEDA GRANT
12"
SANDOVAL COUNTY
SANTA FE COUNTY
ORTIZ
MINE
GRANT
T14N
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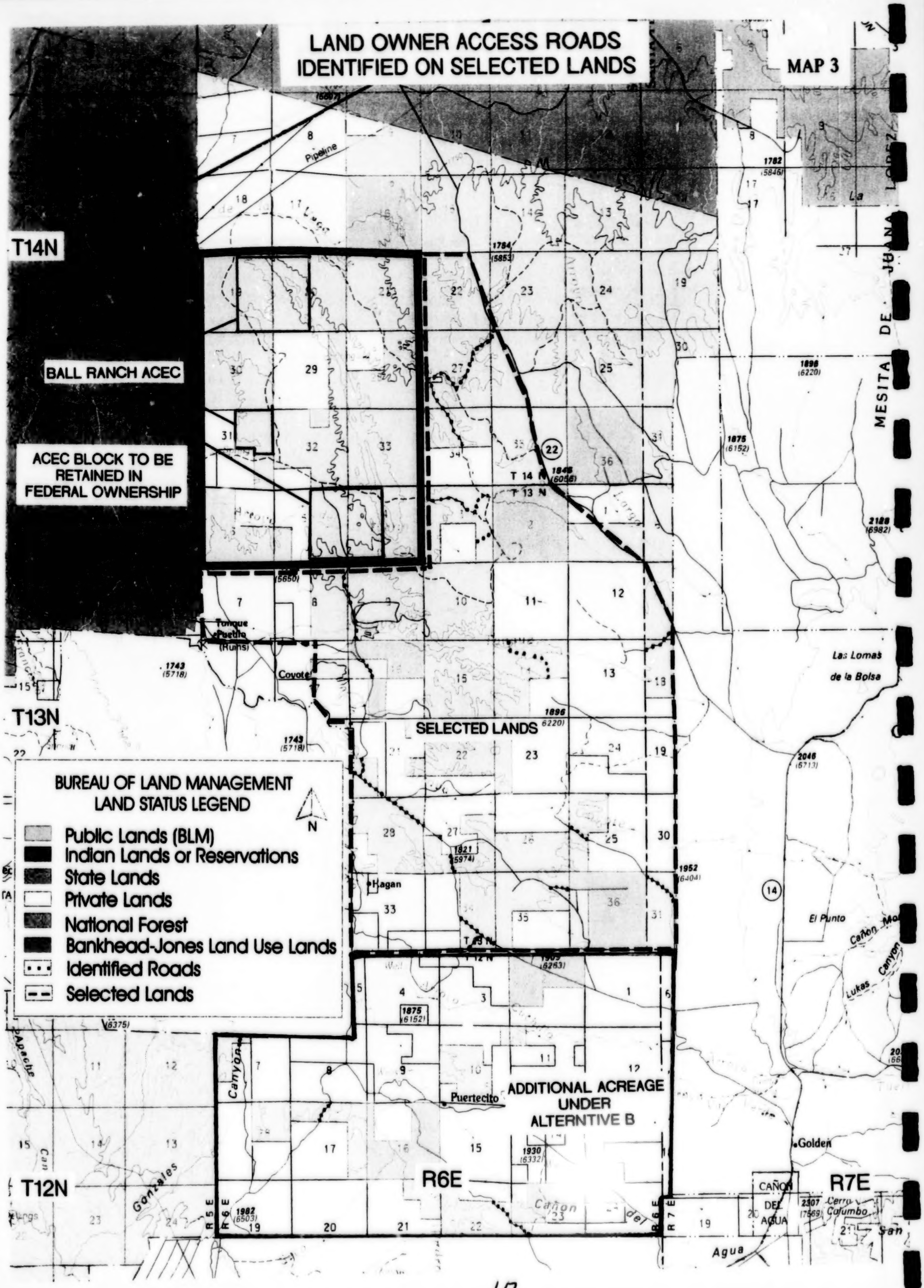
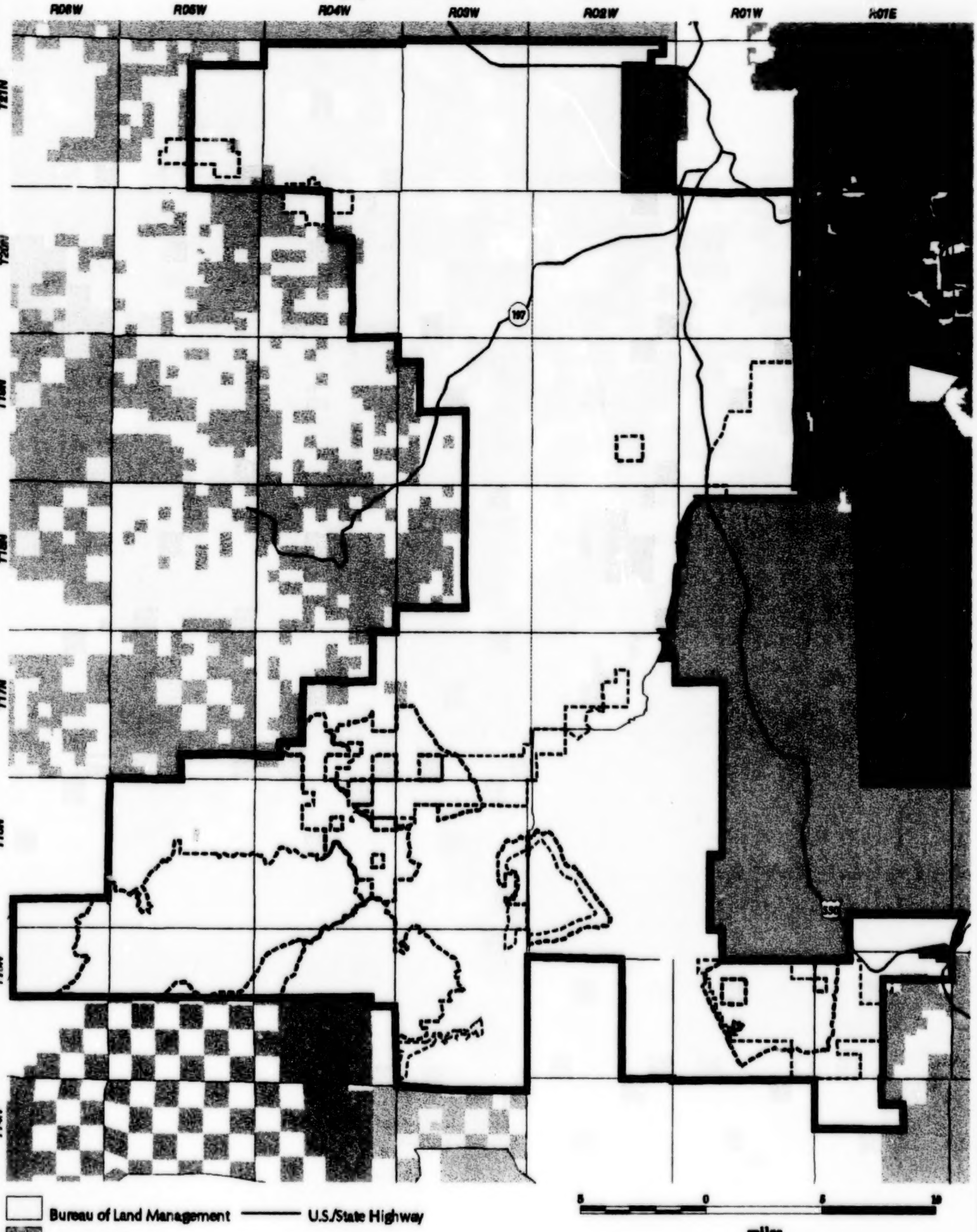


LAND OWNER ACCESS ROADS IDENTIFIED ON SELECTED LANDS

MAP 3

Area of Lands Identified for Acquisition
(Upper Rio Puerco, AFO)

MAP 4a



Produced by the NewMexico State Office Geographic Sciences Team, Bureau of Land Management, October 16, 2000

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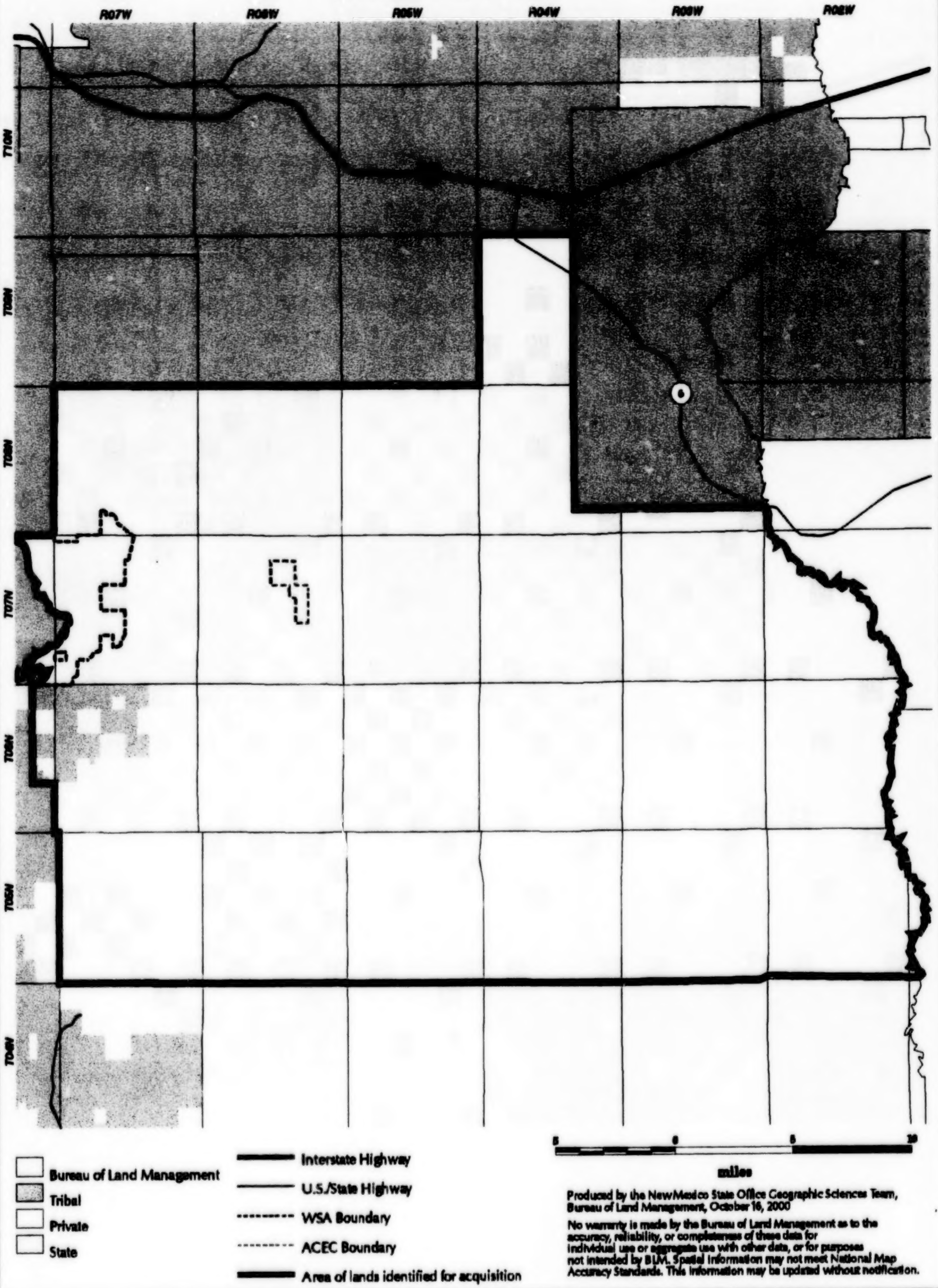
Area of Lands Identified for Acquisition
(Petaca Pinta, AFO)

MAP 4b



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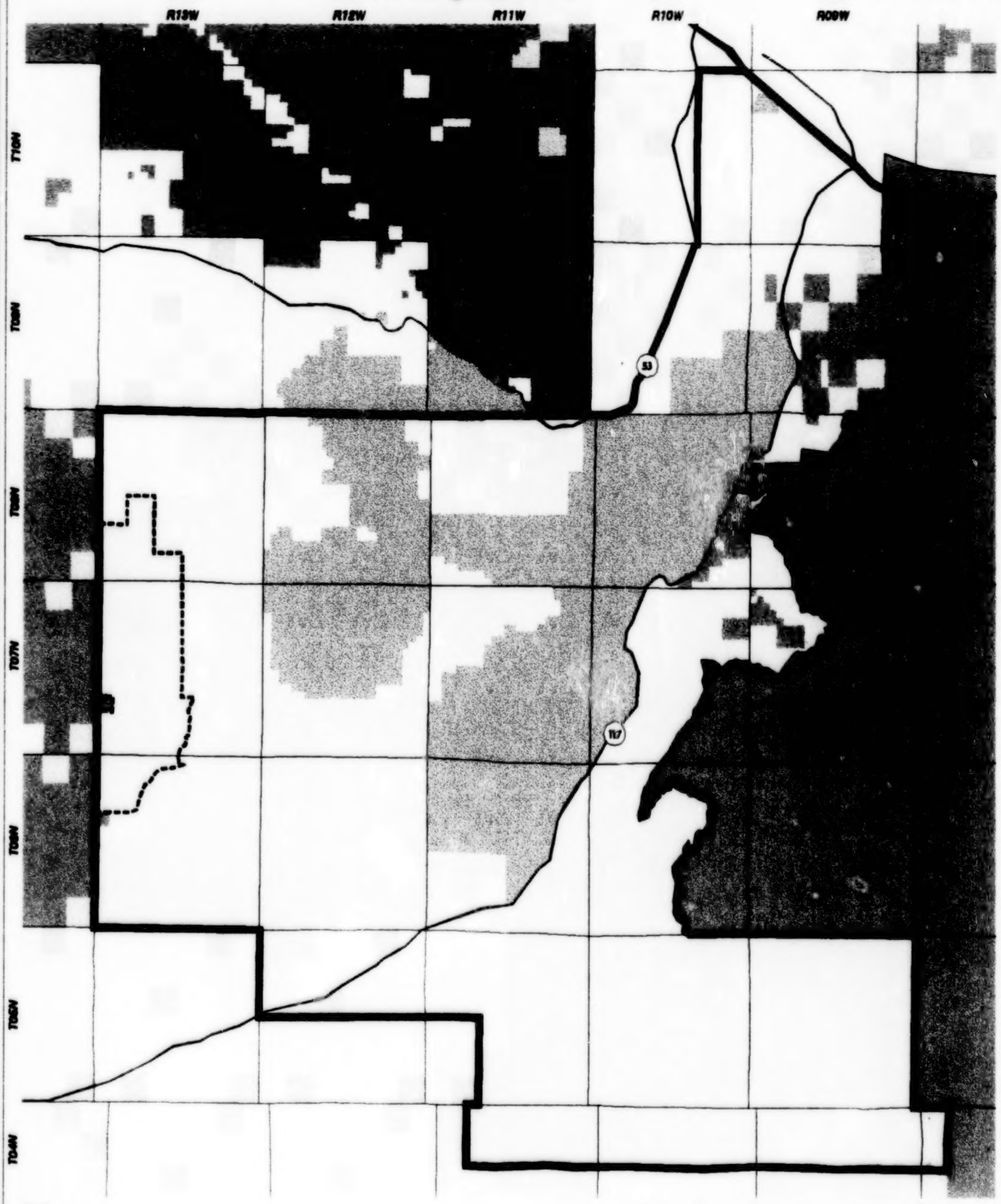
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Area of Lands Identified for Acquisition
(El Malpais, AFO)

MAP 4c



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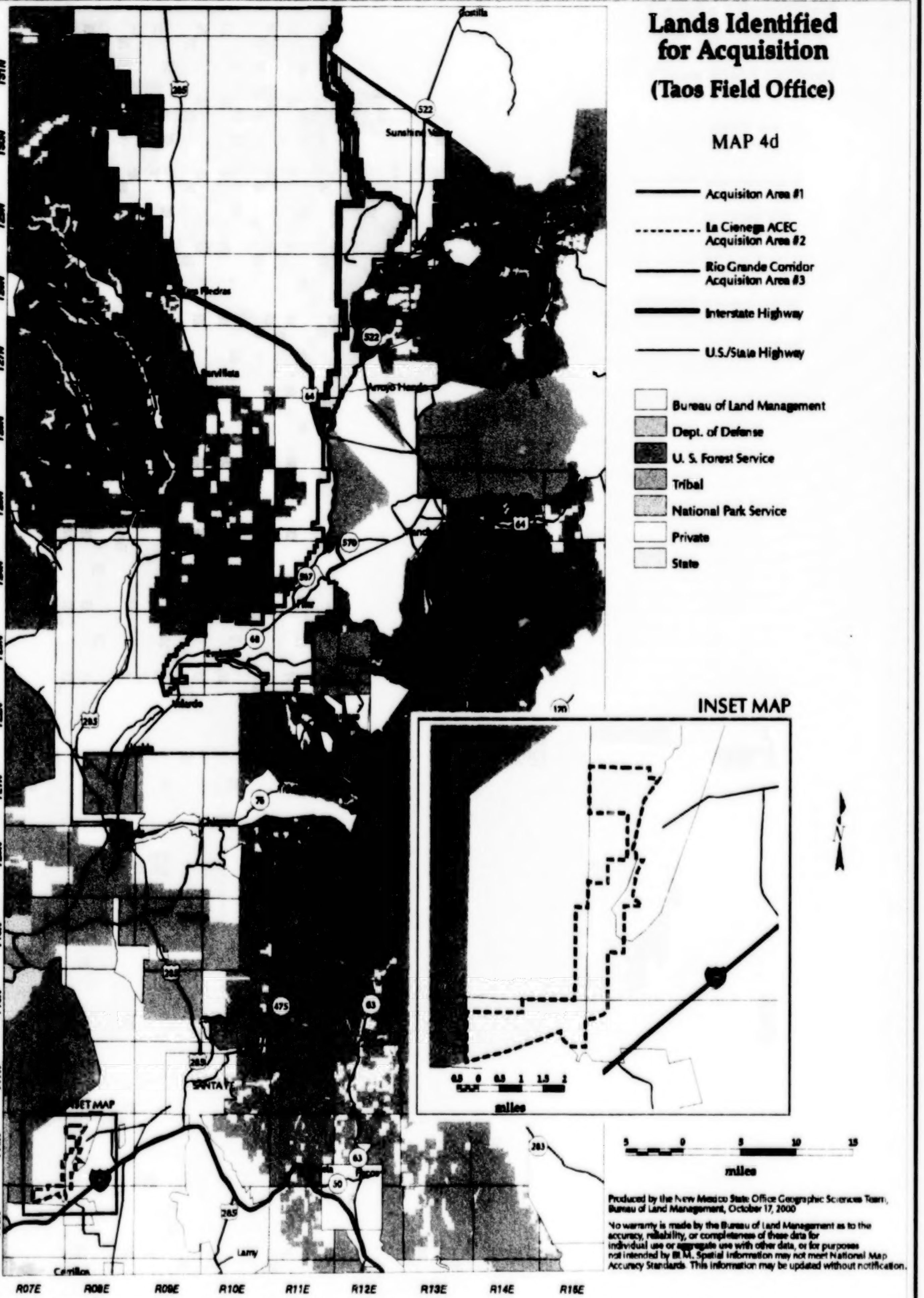
Lands Identified for Acquisition (Taos Field Office)

MAP 4d



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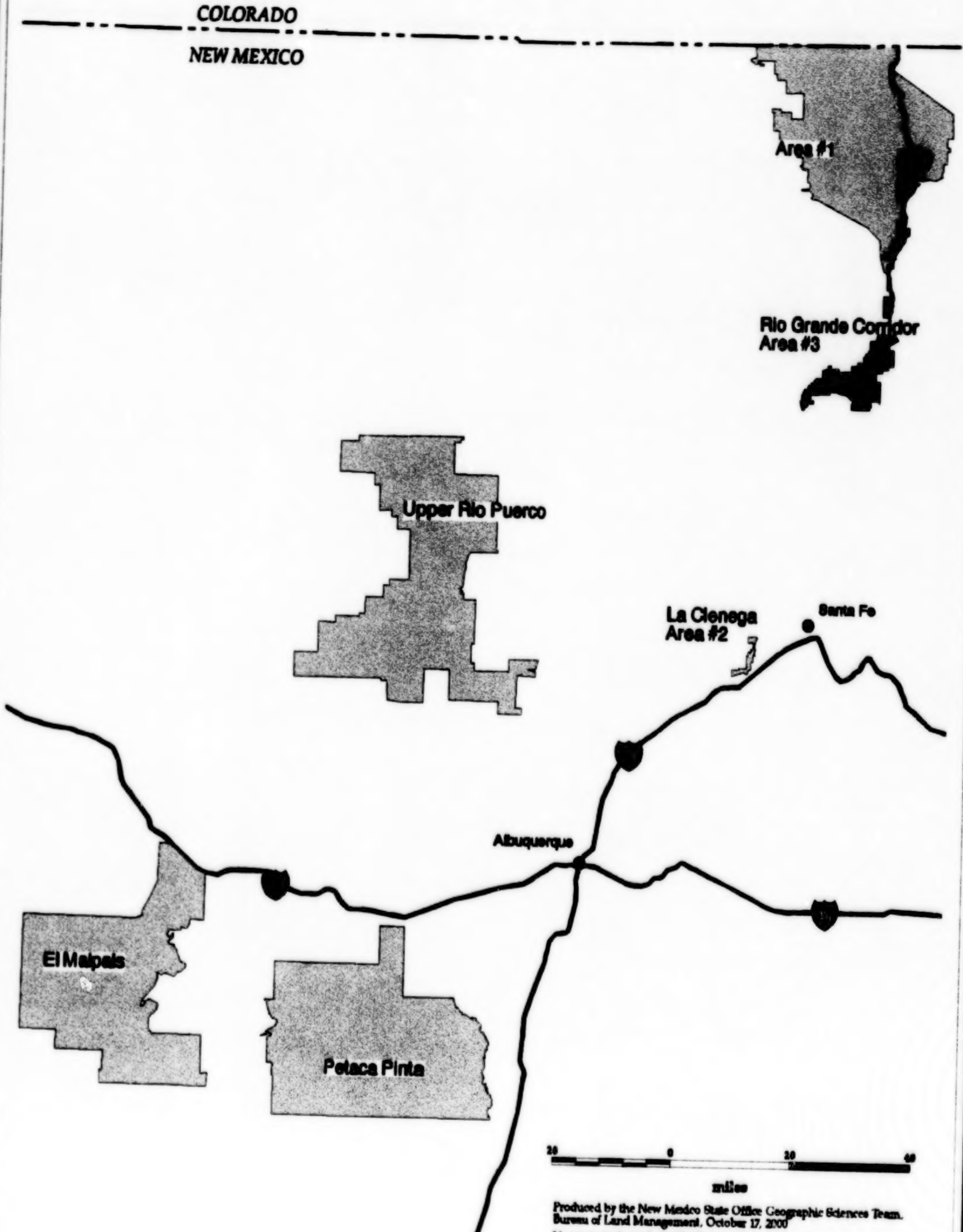
21

Map Locations

MAP 4e



Produced by the New Mexico State Office Geographic Sciences Team, Bureau of Land Management, October 17, 2000

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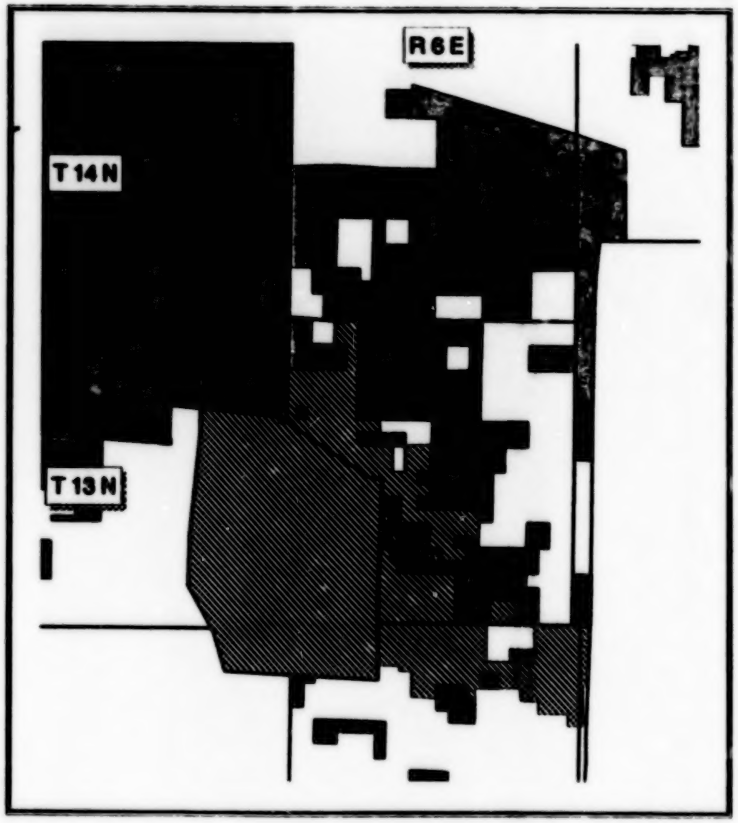
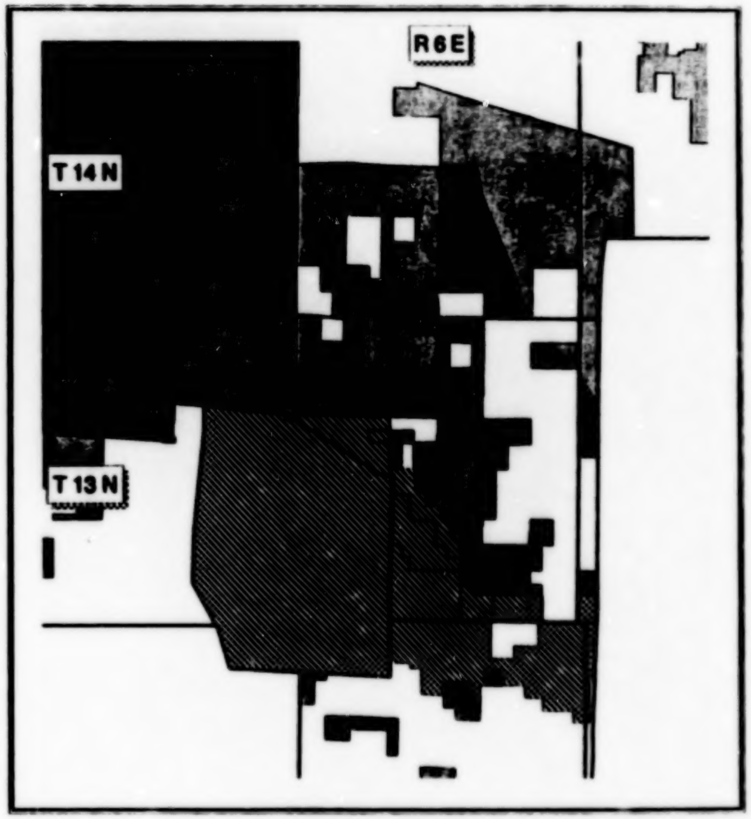
MAP 5



Land Ownership Without San Felipe/Private Exchange

■ San Felipe Lands ▨ Private Exchange Lands ░ BLM Lands



Land Ownership With San Felipe/Private Exchange

■ San Felipe Lands ▨ Private Exchange Lands ░ BLM Lands

CHAPTER 3

AFFECTED ENVIRONMENT

INTRODUCTION

This chapter describes the current resources and environmental conditions of the proposed land exchange area. It will also identify opportunities and constraints for resource use or management.

As previously mentioned in the Introduction in Chapter One and for purposes of this EIS, Federal lands selected for acquisition by the Pueblo are called "Selected Lands." Private lands are called "Offered Lands" where we refer to lands to be offered by the Pueblo to BLM in exchange for the Selected Lands.

SAN FELIPE PUEBLO SETTING

Located on the west bank of the Rio Grande, about 30 to 35 miles southwest of Santa Fe and about 25 miles northeast of Albuquerque, the Indians of San Felipe Pueblo (the Keresans) were already well established when the Spanish arrived here in 1540. San Felipe Pueblo (named by the Spaniards after the patron saint San Felipe Apostol in 1598), consists of a reservation of about 49,000 acres, much of it on the east side of the Rio Grande. The Pueblo was linked to the Camino Real by one of the earliest wagon bridges constructed in western North America.

REGIONAL SETTING

Selected Lands

Selected Lands identified under Alternative A and B are comprised of 10,907 acres and are located in Sandoval and Santa Fe Counties. The lands are approximately 30 miles north of Albuquerque, New Mexico (see Map 1), and are bounded by the San Felipe Reservation to the northwest and the Santo Domingo Reservation to the north. The Selected Lands are intermingled with State and private lands.

Preliminary analysis indicate that climate, air quality, transportation, noise and prime and unique farmlands do not require detailed analysis.

Offered Lands

Offered lands associated with this proposed land exchange are individual sections or groups of sections lying within and adjacent to blocks of public land. Some of this public land is formally designated WSAs, ACECs, and SMAs (see Maps 4a-e).

As stated in the Rio Puerco and Taos RMPs (USDI, BLM, 1986 and 1988), acquiring these Offered Lands would assist in consolidating public ownership in areas where there are outstanding wilderness, recreational, wildlife, riparian, and cultural resource values. Therefore, the manageability of the land ownership pattern would be improved. These lands, if transferred to Federal ownership, would receive resources protection under the current RMPs, ACEC plans, Interim Management Policy for Lands under Wilderness Review (USDI, BLM 1995), and other Federal mandates. The lands acquired within a withdrawn area will be subject to the terms and conditions of that withdrawal.

The proposed exchange would consolidate ownership of public lands in these areas, by eliminating mixed BLM/private ownership. A more manageable land ownership pattern within and adjacent to WSAs, ACECs, SMAs and other high priority acquisition areas and it would also permit more resources protection by BLM's Albuquerque and Taos Field Offices.

NATURAL ENVIRONMENT

Ecological Sites/Vegetation--Selected Lands

The elevation on the Selected Lands within the proposed exchange area ranges from 5,600 feet near Tonque Pueblo in the west-central portion to 6,500 feet on the southern portions of the affected EIS area.

Low hills and mesas bisected by arroyos characterize the topography. These lands contain two broad vegetative communities: grasslands and juniper-savanna. In one small limited area within Section 21, T. 12 N., R. 6 E., there is a ¼ mile of perennial water fed by a spring. These broad categories can be further subdivided by delineating five ecological sites for the two broad communities (see Table 3-1). (An ecological site is defined as land with specific physical characteristics that set it apart from another piece of land.) The five ecological sites within the affected environment are: l) grassland--loamy, 2) juniper-savanna--limy, 3) juniper-savanna--gravelly, 4) juniper-savanna--hills, and 5) juniper-savanna--breaks.

Components that define these physical characteristics include landform and soil type or texture. The physical characteristics of these sites support specific vegetative communities. These physical characteristics and the vegetative communities they support are summarized in Table 3-2.

Ecological Sites/Vegetation--Offered Lands

The Offered Lands tracts within the affected environment are located in four major ecosystems: 1) riparian-wetlands, 2) grasslands, 3) sagebrush-grasslands, and 4) piñon-juniper woodlands.

Threatened, Endangered and Other Special Status Species--Selected and Offered Lands

Six federally listed threatened and endangered, one proposed, 33 species of concern (BLM sensitive), and 22 State of New Mexico threatened and endangered species are known or potentially could occur on public lands within Sandoval County (USDI, FWS 2000; NMDG&F 1998; Sivinski and Lightfoot, 1995). However, because of the land ownership patterns and the specific habitats used by these species, they may occur within the broad borders of Sandoval and Santa Fe Counties but not occur within the San Felipe/-BLM proposed land exchange area.

The federally listed, proposed, and BLM sensitive species that are known to occur within northern New Mexico include: American and Arctic peregrine falcon, bald eagle, mountain plover, Western burrowing owl, loggerhead shrike, and ferruginous hawk. Also, the American and Arctic subspecies of the peregrine falcon are known to pass through northern New Mexico during spring and fall migrations. The bald eagle has been known to migrate through the general area; however, the area is outside of the bald eagle's normal range, which is along the Rio Grande riparian corridor. The mountain plover is found throughout northern New Mexico where ever short-grass prairies are found. And the Western burrowing owl, loggerhead shrike, and ferruginous hawk occur throughout the area wherever their particular habitat sites (e.g., prairie dog towns, open piñon-juniper savannas) occur.

The following serves only as an example of the general vegetative/habitat communities and the potential listed, proposed and BLM sensitive species that could occupy these communities within the area. Many of the more mobile species (i.e., birds and bats) can use several different communities throughout the year.

Shrub-Grassland Community: The species of the shrub-grasslands include the bald eagle, Western burrowing owl, ferruginous hawk, loggerhead shrike, and various species of bats. In addition, many species of bats use the shrub-grasslands as foraging areas.

25

TABLE 3-1

ECOLOGICAL SITES FOUND ON SELECTED LANDS

Ecological Sites	Landform	Soil Textures	Vegetative Communities
Grasslands Loamy	Level to strongly sloping piedmont (5-15% slope)	Sandy to clay loam Contains clay, silt, sand & organic matter	*Grasses* blue grama bottlebrush squirreltail galleta western wheatgrass *Shrubs* broom snakeweed fourwing saltbush winterfat
Juniper-Savanna Limy	Level to strongly sloping piedmont (5-15% slope)	Sandy to clay loam Contains clay, silt, sand & organic matter Highly calcareous (contains lime)	*Grasses* black grama New Mexico feathergrass sideoats grama *Shrubs* Bigelow sage broom snakeweed fourwing saltbush winterfat
Juniper-Savanna Gravelly	Tops of slopes of higher elevation hills (5-15% slope)	Loam to sandy loam with gravels throughout soil profile Contains clay, silt & sand Coarse components: gravel, cobble & stone	*Grasses* black grama blue grama hairy grama New Mexico feathergrass sideoats grama *Shrubs* Apache plume skunkbush sumac soapweed yucca
Juniper-Savanna Hills	Rolling to steep hills (15-75% slope, average slope 20-30%)	Loam, clay & sandy loams with coarse components Contains clay, silt & sand Coarse components: gravel, cobble & stone	*Grasses* black grama little bluestem New Mexico feathergrass sideoats grama silver bluestem *Shrubs* algerita mountain mahogany oak skunkbush sumac
Juniper-Savanna Breaks	Steep slopes of mesas & canyons (average slope 40-50%)	Cobbly to very stony loam Contains clay, silt & sand Coarse components: cobbles & stone	*Grasses* blue grama hairy grama little bluestem sideoats grama wolftail grama *Shrubs* gray oak mountain mahogany skunkbush sumac

TABLE 3-2

ECOLOGICAL SITES FOUND ON OFFERED LANDS

Riparian-Wetlands	Grasslands	Sagebrush-Grass	Piñon-Juniper Woodlands
Señorito Canyon (RPRA) Cerros Colorados segment of Rio Puerco Cerro Cuate segment of Rio Puerco Elk Springs ACEC La Cienega ACEC	Ball Ranch area La Lena WSA Canon Tapia ACEC Cabezon WSA Ojito ACEC Ojo Caliente SMA Warm Springs SMA La Cienega ACEC Burnt Corn Pueblo El Malpais NCA	San Antonio WSA San Antonio SMA Dos Valles area Eagle Mesa area	Wild Rivers Recreation Area Pot Mountain (Cerro del Olla) area El Pueblo SMA Tent Rocks ACEC Petaca Pinta WSA El Malpais NCA

Piñon-Juniper Woodland Community: None of the species appears to be limited or especially dependent upon the piñon-juniper woodland community. However, ferruginous hawks are known to use piñon and juniper trees for nesting purposes, and many species of bats use this community as foraging habitat.

When the Offered Lands become BLM lands they will be treated as other public lands and all requirements of the Endangered Species Act will be followed.

Water Resources--Selected Lands

With one exception there are no perennial streams within the proposed exchange area. That exception lies in the Selected lands associated only with Alternative B and consist of a 1/4 mile of stream with about an acre of riparian area from Chimal spring located in Section 21, T. 12N., R. 6E. Two major ephemeral drainage systems, Arroyo de la Vega de los Tanos and Arroyo Tonque, flow west and northwest across the area to the Rio Grande from the slopes of the Ortiz and San Pedro Mountain Ranges.

The most dependable water source in the exchange area is ground water and that is limited by geology and major north-south fault systems. The Diamond Tail and San Fransico faults occur along the west side of the area while the Barro, Tano, and Rosario-La Bajada Faults lie on the eastern border. The 6 major bedrock and basin-fill formations in the area are generally sloped downward to the east and north. The age of these formations becomes progressively younger from south to north.

The oldest formations are of Permian age, more than 240 million years (m.y.) old, and consist of sandstones, mudstones, and limestones. The Jurassic-Triassic formations are between 138 and 240 m.y. old and made up of sandstones and mudstones with some gypsum and limestones. The next youngest are Upper Cretaceous rocks in the 63 to 96 m.y. range which contain marine and non-marine shales and sandstones with some coal beds. The Galisteo Formation, 50 m.y., with sandstones, mudstones and conglomerates, and the Espinosa Formation, 38 m.y., with volcaniclastic and interbedded volcanic and intrusive igneous rocks are the next youngest formations. About 25 million years ago, this part of New Mexico began to pull apart along a series of north-northeast trending faults. As the earths crust extended, a series of basins were formed as the crust dropped down. The higher areas formed along the edges of these basins.

Erosion of the highlands filled the basins. It is those basin-filling deposits that became known in this area as the Santa Fe Formation and that are the principle water-bearing units. Although the Santa Fe is generally divided into 3 units, Upper, Middle and Lower only the Middle and Lower units are found within the exchange area. The Lower Unit has a low groundwater production potential because it consists of fine to medium grained material such as clays, silty sands, and interbedded sands and silty clays with local conglomeratic or gravelly zones that transmit water very slowly.

The Middle unit has the greatest potential for water production. That potential is based on an estimated local saturated thickness of 1,000 to 2,000 feet, and a saturated horizontal hydraulic conductivity of not more than 4 feet per day. Production would also depend on the quality of well design and construction. The ground water generally flows northwestly to the Rio Grande.

The BLM has no water rights claims within the exchange area but the water rights on 3 wells on BLM lands have been claimed by private individuals and a corporation. There are 2 wells on state lands and 1 well of record on private land. The BLM State Land Board has a policy keeping water rights with the land.

Except for the spring in the Selected Lands associated with Alternative B the BLM has no water rights claims within the exchange area. The spring and riparian area would be claimed as a Federal water right under the April 17, 1926, Executive Order for Public Water Reserves. That Order can be revoked by the Secretary of the Interior. Water rights on wells and tanks on BLM lands have been claimed by permittees. There are wells on State lands but the State Land Board has a policy keeping water rights in the name of the State and with the land.

Water Resources--Offered Lands

The highest priority areas for land ownership consolidation were delineated in the Rio Puerco and Taos Resource Area Management Plans. Until the Offered Lands are identified no inventory of natural resources on these lands will be made. Water resources in the Offered Land are most likely to consist of ephemeral channels, stock tanks, and livestock wells. There may be opportunities to acquire reaches of perennial streams and riparian areas. The BLM would be interested in acquiring any water rights associated with these lands.

Wildlife--Selected Lands

An open, arid juniper-piñon woodland Kuchler ecosystem type with some livestock water troughs provides habitat capability for about 119 animal species in the Selected Lands. Reliable water in the proposed area for most wildlife is either not present or not accessible due to the height of the cattle troughs. Overall, about two amphibian, 44 bird, 36 mammal and 37 reptile species would be expected to be associated with the local ecosystems.

Of the 44 species of migratory birds associated with the local ecosystems, 37 are neotropical migratory birds (see Glossary, Appendix F). The Selected Lands would be expected to provide stopover habitat for between 50 and 100 additional migrant species during the spring and fall migrations.

Wildlife--Offered Lands

The Offered Lands would most likely contain one or more of the following Kuchler ecosystem types: grama-galleta steppe grassland, Great Basin sagebrush shrubland, juniper-piñon woodland, or pine-Douglas fir forest.

Several hundred wildlife species associated with these ecosystems exist within BLM's Albuquerque Field Office area. The species present come from among a possible 11 species of amphibians, 205 species of birds, 96 species of mammals, and 46 species of reptiles.

Since nearly all bird species associated with the Albuquerque Field Office area are migratory birds, about 200 potential species exist on the offered lands plus another 50 to 100 stopover migrants during the spring and fall migrations.

28

Geology/Paleontology--Selected Lands

The Selected Lands for the affected environment of this DEIS lie approximately at the center of north-central New Mexico, along the eastern flank of the Rio Grande Rift System (see Map 1). The rift is composed of a series of north-trending *en echelon* grabens (down-dropped or offset blocks). This region is characterized by volcanic plateaus, dissected alluvial basins, and uplifted mountain ranges. Sedimentary, igneous, and metamorphic rocks (see Appendix F, Glossary), ranging in age from Precambrian to Quaternary are present.

Also found within the Selected Land portion of the affected environment for this DEIS are extensive paleontological deposits of finely-preserved petrified wood, deposits of bivalve marine shells and, most importantly, considerable quantities of Eocene mammal bones within the Ball Ranch ACEC and surrounding lands. (These lands would be retained in Federal ownership under the Proposed Action Alternative.) However, the coarse-grained deposits outside of the federally retained area are unlikely to contain well-preserved fossil material.

Geology/Paleontology--Offered Lands

Physiographically, the offered lands are located in the Southern Rocky Mountain Province, the Intermountain Plateau, and the Basin and Range Plateau (see Glossary, Appendix F).

The Southern Rocky Mountain Province includes only a small part of north-central New Mexico, terminating at the south end of the Nacimiento Mountains and the Sangre de Cristo Range (north of Glorieta Mesa at the northeastern part of the study area). This Province includes parts of two major structures, the Tusas Uplift and the Rio Grande Trough (rift). Landforms common to this province include flat open mesas, arroyos, rolling foothills, mountainous areas, steep canyon rims and terraces, and gorges. Stratigraphics of the area include volcanic pyroclastics, Tertiary age flood basalts, and alluvial deposits resting directly on Precambrian rocks (see Glossary, Appendix F).

The Intermontane Plateau contains two sections of the Colorado Plateau Province: (1) The Navajo section, located in northwestern New Mexico, consists of mesas, cuestas, rock terraces, retreating escarpments, arroyos, canyons, and the structural San Juan Basin. The stratigraphy of the area is characterized by outcrops of sandstone with lesser amounts of shale subjected to erosion. (2) The Datil section to the south includes stream-dissected mountain ranges, depositional slopes and flats, alluvial fans, erosional surfaces, lacustrine and basinal structures, and volcanic centers. Sedimentary and igneous rocks ranging in age from Cretaceous to Quaternary are present.

The Mexican Highland division of the Basin and Range Plateau consists of high desert and intermountain areas. These areas contain fault-block mountains, basalt flows, mesas composed of sandstone and shales, canyons with narrow valley floors, river floodplains, and level to undulating piedmont slopes and plains. A wide range of lithologies is present in this division, including valley alluvium, incised Cretaceous and Tertiary rocks, and floodplain and stream-channel deposits derived from uplift areas.

For stratigraphic details on formation/member exposures on the Offered Lands, see the *New Mexico Statewide Wilderness Study* (USDI, BLM, 1988a). (For definitions of the above geologic terms, please see Appendix F.)

Minerals--Selected Lands

Locatable mineral activity in the Selected Land area has mainly been uranium exploration. The uranium mineralization occurs in high-energy, braided-stream sediments and consists of modified roll-front deposits associated with the Tertiary age Galisteo Formation. The selected area had numerous claims in the 1980's, but all claims now are inactive. The uranium potential in the selected area is low-moderate to less favorable or unknown (McLemore, 1984; Gray, 1989). Currently in the selected land area, no active mining claims for gold or other locatable metals and non-metals exist. Potential for base and precious metals and other locatables in the selected area is less favorable or unknown (Gray, 1989).

Saleable minerals include sand and gravel, limestone, gypsum, and other industrial minerals. In the selected land area, the potential exists mainly for sand and gravel mining, while limestone, gypsum, and other saleable minerals are produced nearby. There is petrified wood present nearby, but most of this is confined to the Ball Ranch ACEC area (not part of the Selected Lands proposed for exchange). Most sand and gravel mined in the general area is found in young terrace and pediment deposists of the Rio Grande floodplain. However, sand and gravel do occur within the selected area in Quaternary age pedimental deposits. The proximity of the Rio Grande floodplain deposits to Albuquerque, land status and access, and other economic factors possibly have prevented sand and gravel mining in the selected land area to date.

Leasable mineral activity in the selected area has been for oil and gas and nearby coal mining. Coal in the area is found in the Una del Gato field (aka, Hagan field), a faulted, eastward-dipping homocline located between the Sandia and Ortiz mountains. Most coal mined in the area has been mined from the Hagan mine (not part of the selected lands). Potential [for coal] in the Selected Lands near the Hagan mine is considered low to moderate. For the remainder of the selected area, the coal potential is low to less favorable or unknown.

Lands in the selected area have not produced hydrocarbons to date.

The potential for oil and gas in the selected area is less favorable or unknown in the southern portion (McLemore, 1984; Gray, 1989).

Minerals--Offered Lands

Some of the private lands that BLM would acquire would probably be incorporated into specially designated areas. Consequently, no surface disturbance, including mining, would occur on these lands.

Land Uses--Selected Lands

The Federal government administers both surface and subsurface estate (see Appendix F) on all the Selected Lands within the EIS study area. Current and potential uses of the Selected Lands analyzed in this EIS are: domestic livestock grazing, rights-of-way (ROW) development, mineral material (sand & gravel) sales, wildlife habitat, outdoor recreation, and cultural resources management. Other potential uses include additions to State and local governments and qualified non-profit organizations under the Recreation & Public Purpose Act (R&PP; see Appendix C).

Past activities within the study area have included coal mining, and uranium exploration. Since 1995, numerous public requests for sand and gravel sales have also been received. BLM manages the land under the principles of multiple use and sustained yield, under their mission statement (see Appendix A), and under the laws of FLPMA.

Many of the public lands contain historical access roads that are used by adjacent landowners to reach their private lands. To identify these access roads, the BLM requested landowners to mark them on a map (letters dated May 19, 1998). To mitigate landowner concerns regarding access, the San Felipe Pueblo has agreed to establish agreements for access simultaneously to any land transfer affecting these historical access roads. (Map 3 shows the general location of roads identified by landowners as being historical access roads.) If agreements can not be reached with the landowners, BLM would issue rights-of-way and make the exchange subject to these rights.

Other Federal land areas are occupied by various facilities (ROWs) currently authorized by the BLM. (Listings of ROWs and other reserved rights are found in Appendix I.)

30

Occasionally, the need for new development on the Selected Lands arises, usually in relation to access roads to service nearby private parcels and utility facilities (power line, pipelines), or roads and highways to service outlying areas. The New Mexico Highway and Transportation Department notified the BLM through correspondence of a corridor study being initiated through the proposed Federal lands for a highway connection between Interstate 25 and State Road 14.

There is no legal access to the southernmost sections in the study area (public lands within sections 7,16, 17, 21, 25-28, 34-36, T. 13 N., R. 6 E. and section 31, T. 13 N., R 7 E. The contiguous block of public land north and east of these sections may contain public access; however, there are physical barriers such as fences that prevent access to the entire block.

Currently, there are four transmission power lines and County Road 252A (formerly State Road 22) which was proposed for consideration under Revised Statue 2477 Right-of-Way within the exchange area. Two power line rights-of-way are authorized to the Public Service Company of New Mexico (PNM) and the other two to Plains Electric. The two PNM power lines are within the designated corridor identified in the RMP. Four grazing allotments are licensed within the affected area, for livestock use. Many range improvement projects are authorized, either under cooperative agreements or under Section 4 permits, and include improvements such as fences, corrals, and earthen tanks (see Livestock Grazing).

Land uses on lands considered for exchange under Alternative B are similar to those which would be affected under the Proposed Action Alternative. There are four existing rights-of-ways for two gas pipelines, a liquid hydrocarbons pipeline and a CO_2 pipeline on the additional acreage considered under this alternative. There are additional roads identified by landowners as being historical access roads. Sandoval County has requested a right-of-way through a quarter section of public land within section 17, T. 12 N., R. 6 E. Portions of this area are also being considered by the New Mexico Highway and Transportation Department for a corridor study for a highway connection between Interstate 25 and State Road 14.

Land Uses--Offered Lands

The Offered Lands are individual sections or group of sections lying within blocks identified as Management Class A lands in the Rio Puerco RMP [see Map 4a-e]. Private lands within the Ball Ranch ACEC block, as well as other SMAs administered by the Taos Field Office especially within or adjacent to Orilla Verde Recreation Area, Burnt Corn Pueblo and La Cieneguilla, may also be purchase by the Pueblo for exchange. As stated in the Rio Puerco and Taos RMPs, acquisition of these areas could serve to consolidate public ownership in areas of outstanding recreation, wildlife, riparian, and cultural values. Lands within WSA's would be managed under Interim Management Policy for lands under Wilderness Review (USDI, BLM 1995). The lands not within WSAs would be managed under the management prescriptions of the ACEC Plans and the RMPs.

Consolidating land ownership would result in a more manageable land ownership pattern within the management Class A lands and(or) high priority acquisition areas.

Wilderness--Selected Lands

The Selected Lands within the proposed exchange area contain no WSAs or designated wilderness areas.

Wilderness--Offered Lands

A thorough discussion of the wilderness resources of the Offered Lands can be found in the *BLM New Mexico Statewide Wilderness Study: Final Environmental Impact Statement* (USDI, BLM, 1988a), which lists the Offered Lands within WSAs potentially identified for acquisition.

Recreation--Selected Lands

Recreational activities within the proposed exchange Study Area affected by this DEIS include noncommercial, noncompetitive, and non-organized recreational activities such as hiking, camping, picnicking, wildlife viewing, upland bird hunting, recreational shooting, horseback riding and photography which are dispersed throughout the proposed exchange area. Other recreational activities consist of motorized vehicle and mountain bike use on established roads. In the Study Area, 8,450 acres of Selected Lands fall within the 22,731-acre Ball Ranch off- road vehicle designation area as identified through the 1986 Rio Puerco RMP (maintained and reprinted in 1992 and published in the Federal Register on April 16, 1987). Here motorized vehicle or Off-Highway Vehicle (OHV) use within this designated area is limited to existing roads and trails. On the remaining 2,457 acres OHV use is not limited to existing roads and trails. However, there is no legal public access to the southernmost sections in the proposed exchange study area.

Access to much of the Selected Lands for recreational use is restricted due to the pattern of mixed and private ownership and physical barriers such as fences that prevent access to blocks of public lands. Largely because of this restricted access, recreational use is not considered to be high. However, demands for recreational use and access to these lands are expected to increase since the proposed exchange study area is within a short drive of some rapidly growing communities and the state's largest metropolitan area.County Road 252A (formerly State Road 22) helps form the northern boundary of the study area.

Recreation--Offered Lands

Offered lands would most likely provide resources for dispersed recreation activities that would be similar to those on public lands immediately adjacent to the Offered Lands. Currently recreational use on the offered lands would be at the discretion of the private land owner. The Offered Lands within WSAs, once transferred, would provide additional opportunities for primitive and unconfined types of recreation activities, similar to those currently provided on adjacent public lands.

Visual Resources--Selected and Offered Lands

(Note: Ratings from the BLM scenic quality classes, visual sensitivity levels, and distance zones are combined to form Visual Resource Management [VRM] Classes. A VRM class identifies the suggested degree of human modification that should be allowed in a certain landscape.)

BLM's Rio Puerco RMP indicated that 9,460 acres of the Selected Lands within the DEIS study area are classified as VRM Classes III and IV. This was primarily due to lower scenic value, the low amount of use this area received, and the lack of public concern about visual change to the landscape character when this area was inventoried. Within the 9,460 acres of Selected Lands, approximately 240 acres have been classified as VRM Class III. The remaining 9,220 acres are classified as VRM Class IV. The other 1,447 acres of public land in the southernmost sections of the proposed exchange study area were left unclassified through the RMP since they were isolated scattered parcels of public land. The Class III lands are located in section 28, T. 13 N., R. 6 E., north of the Hagan ghost town.

In Class III areas, management actions that affect the basic visual elements of the landscape may be evident but should remain subordinate to the existing landscape. Because Class IV areas are considered to be of lower value visual quality, management objectives allow contrasts to be the dominant landscape features in the area. Such contrasts might include developments or structures that attract attention in the landscape, such as communication sites, mineral development, or disposal sites. However, every attempt would be made to minimize modifications to the landscape. On the unclassified lands there are no RMP approved visual management objectives. Again, attempts would be made to minimize impacts on the existing visual resources from proposed surface disturbing activities on these unclassified lands.

The Offered Lands have no visual resource management classification applied to them. Several of the potential Offered Land parcels are located within or adjacent to existing special management areas classified as VRM Class II, which does not allow changes to the landscape that would attract attention.

Hazardous Materials--Selected Lands

An Environmental Site Assessment (ESA) was conducted on all lands affected by this EIS. They have been examined using the American Society for Testing and Materials (ASTM) protocols Standard Practice for Environmental Site Assessments: Transaction Screen Process (ASTM, 1993), and in accordance with Section 120(h) of the Superfund Amendments and Reauthorization Act (SARA). No evidence exists to indicate that any hazardous material (the term includes hazardous substances, wastes, or other materials) was stored for one year or more, disposed of, or released on the affected land exchange property.

Hazardous Materials--Offered Lands

Once an equal value of Offered Lands are identified from Maps 4 (a-e), a hazardous materials inventory would be conducted. Information from this report could provide the basis for a BLM decision to delete certain parcels from the proposed land exchange.

Cultural Resources--Selected Lands

A BLM Class I review of existing cultural resources information (Roney 1996) shows that approximately 25% of the San Felipe Exchange lands have been inventoried for cultural resources. Results suggest that these Federal lands and their immediate vicinities were used minimally during the PaleoIndian and Archaic Periods. More intensive use occurred during the early part of the Pueblo IV Period (AD 1315 to 1450), when a number of small field houses were built.

Two large pueblos which are within ½ mile of the exchange lands were occupied during this time (Espinosa Ridge and Tonque Ruin). Puebloan ruins on the Selected Lands themselves are simple artifact scatters or fieldhouses ranging from 1 to 6 rooms in size. In historic times, Native American use has been concentrated in the area of present-day Pueblos, although ethnographic evidence shows that tribal members still attach great historical, cultural and traditional significance to the proposed land exchange area.

Historic European use in this area has been focused in mining communities on adjacent lands which are now patented. Mining began near Golden, New Mexico, in the early 1600s, and the San Pedro and Ortiz mountains have been the object of intense, if intermittent economic interest. Around 1900, the town of Hagan, located on private land in the southern portion of the exchange area, was an important coal mining center. On the Selected Lands themselves, ranching has been the predominant economic activity.

Cultural resources on lands considered for exchange under Alternative B are similar to those which would be affected under the Proposed Action. A large pueblo occupied in late prehistoric and early historic times (Pa'ako) is located about four miles south of the Alternative B lands and reconnaissance survey within these parcels has revealed field houses and activity areas dating to late prehistoric times.

Contemporary Hispanic groups also have strong ancestral ties to the Alternative B lands. The Las Huertas land grant, issued in 1767, extended as far east as the Alternative B lands. The histories of this land grant and that of the overlapping San Pedro Land Grant are complex, but by 1840 a number of Hispanic settlements in this area are well documented, including San Jose de Las Huertas, Placitas, Tecolote, Tejon, San Pedro, and La Madera. The 1860 General Land Office survey of the San Pedro grant boundary shows that the Hispanic settlement of Chimal was on both sides of the grant boundary in the immediate vicinity of the Alternative B lands. According to the descendants of these settlers, the name Chimal is derived from a Nahuatl (Aztec) word meaning "warrior's shield." Archeological reconnaissance has revealed an historic spring development on BLM lands which probably dates to this era, as well as ruins of dwellings just outside the exchange area. Oral histories indicate that Chimal was a genizaro settlement. Genizaros were the descendants of Apache, Commanche, and other Indian children captured in raids and raised in Hispanic households. The descendants of these early Hispanic settlers retain strong ties to this landscape, including the Alternative B lands.

Cultural Resources--Offered Lands

Lands identified for potential transfer to BLM include significant cultural resources. Examples are Burned Corn Pueblo a large 13th century ruin in the Galisteo Basin, lands near Santa Fe, NM which contain significant prehistoric rock art, and a parcel near Cuba, NM which includes the heart of a 12th and 13th century Anasazi community.

American Indian Uses--Selected Lands

In 1997, BLM proposed to exchange lands now included in the San Felipe Exchange to the State of New Mexico. In response to this proposal, both Santo Domingo and San Felipe Pueblos expressed concerns related to traditional, historical, and cultural access and uses of these lands. One important objective of the exchange proposed here is to give San Felipe Pueblo direct control over those lands and traditional uses.

American Indian Uses--Offered Lands

No specific information is available about American Indian Uses of the lands which BLM might receive under this proposal.

Rangeland Management--Selected and Offered Lands

Ortiz Mountain Allotment. The Ortiz Mountain Allotment is currently licensed for 2,272 animal unit months (AUMs). There are 15,413 acres of public land in the allotment, and it is 66 percent Federal land. Forty-nine percent of the allotment is in the Santo Domingo Exchange, 22 percent is in the San Felipe Exchange, and 29 percent is being retained in Federal ownership. The allotment is in the "I" (Improve) management category and has been recommended to remain in the I category.

The allotment is used as a cow-calf operation, with grazing occurring year long. Most years, there is some non-use to a varying extent, depending on climate and the livestock market. The current permit was effective 3/1/1993 and expires 2/28/2002. The permitted use is as follows:

TABLE 3-3a

PERMITTED LIVESTOCK USE

Allotment Name	Period of Use		Livestock Number & Kind	% Federal	AUMs	Suspended	Active
	Beginning	End					
Ortiz Mountains	3/1	2/28	50 C	66	396	0	396
	5/1	10/31	470 C	66	1876	0	1876
				Total	2272	0	2272

Tejon Allotment

The Tejon Allotment is currently licensed for 731 AUMs. There are 3,791 acres of public land in the allotment and is 15% Federal land. All of the public land in the allotment is associated with the San Felipe exchange, phase I.

The allotment is used as a cow-calf operation, with grazing occurring from 11/1 to 5/30. The current permit is effective 3/1/1993 and expiring 2/28/2002. The permitted use is as follows:

TABLE 3-3b

PERMITTED LIVESTOCK USE

Allotment Name	Period of Use		Livestock Number & Kind	% Federal	AUMs	Suspended	Active
	Beginning	End					
Tejon	3/1	5/30	600 C	15	269	0	269
	11/1	2/28	600 C	15	355	0	355
	3/1	5/30	7 H	15	3	0	3
	11/1	2/28	7 H	15	4	0	4
				Total	631	0	631

Coyote Arroyo

The Coyote Arroyo Allotment is currently licensed for 121 AUMs. There are 720 acres of public land in the allotment and is 25% federal land. All of the public land in the allotment is associted with the San Felipe exchange, phase I.

The allotment is used as a cow-calf operation, with grazing occuring year long. The allotment has been in non-use for the last four years. The current permit is effective 3/1/1998 and expiring 2/28/2008. The permitted use is as follows:

TABLE 3-3c

PERMITTED LIVESTOCK USE

Allotment Name	Period of Use		Livestock Number & Kind	% Federal	AUMs	Suspended	Active
	Beginning	End					
Coyote Arroyo	3/1	4/30	25 C	25	13	0	269
	5/1	2/28	25 C	55	83	0	355
	11/1	2/28	25 C	25	25	0	
				Total	121	0	121

Tonque Arroyo

The Tonque Arroyo Allotment has no allotttee and is currently ungrazed. The public land is unfenced and there is probably some trespass livestock on public lands. There are 1,472 acres of public land in the allotment with a carrying capacity of 227 AUMs.

E. Gallegos Lease

E. Gallegos, a Section 15 lease, is currently licensed for 180 AUMs. The lease considers only the forage produced on the 1,088 acres of public land and is billed at 100% federal land. All of this public land is associated with the San Felipe exchange, Alternative B.

The lease is used as a cow-calf operation with grazing occurring year long. The permitted use is as follows:

TABLE 3-3d

PERMITTED LIVESTOCK USE

Allotment Name	Period of Use		Livestock Number & Kind	% Federal	AUMs	Suspended	Active
	Beginning	End					
E. Gallegos Lease	3/1	2/28	15 C	100	180	0	180
				Total	180	0	180

M. Montano Lease

M. Montano, a Section 15 lease, is currently licensed for 36 AUMs. The lease considers only the forage produced on the 360 acres of public land and is billed at 100% federal land. All of this public land is associated with the San Felipe exchange, Alternative B.

The lease is used as a cow-calf operation with grazing occurring year long. The permitted use is as follows:

TABLE 3-3e

PERMITTED LIVESTOCK USE

Allotment Name	Period of Use		Livestock Number & Kind	% Federal	AUMs	Suspended	Active
	Beginning	End					
M. Montano Lease	3/1	2/28	3 C	100	36	0	36
				Total	36	0	36

Socio-Economic Conditions--Selected and Offered Lands

For purposes of social and economic analysis, the Selected Lands are primarily in Sandoval County. The balance of the Selected Lands (approximately 14.0 percent) is in Santa Fe County. Because of their proximity to Albuquerque and Santa Fe, two of the state's major population centers, some spillover effects would occur, and Bernalillo County would also be affected. Population, employment income, and surface acreage ownership are presented for these counties. Because the potential Offered Lands are scattered, small tracts, the change in their ownership is less likely to have measurable social or economic effects.

Change of ownership would contribute to manageability and to resource protection for special value resources.

San Felipe Tribal Government Offices are located within Sandoval County. The Pueblo, the home of a reservation population of 3,131 tribal members, has 48,859 trust acres in the county.

Sandoval County's population has grown at a very rapid rate since 1970 (see Table 3- 4). The census reported a 1970 population of 17,492; by 1980, the population had increased by 97 percent to 34,400. The rate of increase declined between 1980 and 1990, but the population grew to 63,319. Estimates for July 1, 1998, show Sandoval County with a population of 88,049. The 1970-to-1998 percentage increase was 403.37, compared to a 70.78 percent increase during the same period for the State of New Mexico. Santa Fe County had an increase of 125.26 percent to 123,386, and Bernalillo County had an increase of 66.56 percent to 525,958.

The three counties associated with the exchange area include more than 42 percent of the State's population. The State population by race includes 86.6 percent White, 2.6 percent Black, 9.4 percent American Indian, and 1.5 percent Asian or Pacific Islander. Ethnicity is estimated at 40.3 percent Hispanic (any race), 48.0 percent White Non-Hispanic and 52.0 percent Non-Anglo (see Table 3-5). Sandoval County, the primary area affected by the exchange, has a race distribution of 75.3 percent White, 2.2 percent Black, 21.1 percent American Indian, and 1.3 percent Asian or Pacific Islander. Ethnicity is estimated at 29.1, Hispanic, 48.4 percent White Non-Hispanic, and 51.6 percent Non-Anglo (see Table 3-6).

The Tribal Profile (received 2/2/00 from the Southern Pueblo's Agency for the San Felipe Pueblo) showed a reservation population of 3,131, which represents approximately 17 percent of Sandoval County's American Indian population and approximately 3.6 percent of the county's total population.

TABLE 3-4

EXCHANGE AREA POPULATION
(By County and Year)

County	Year			
	1970	1980	1990	1998
Bernalillo	315,774	420,261	480,577	535,958
Sandoval	17,492	34,400	63,319	88,049
Santa Fe	54,774	75,519	98,928	123,386
Total (New Mexico)	1,017,055	1,303,302	1,515,069	1,736,931

TABLE 3-5

EXCHANGE AREA POPULATION
(By Race and Ethnicity; 1998)

	RACE					ETHNICITY	
County	**White**	**Black**	**American Indian**	**Asian & Pacific Islander**	**Total**	**Hispanic (Any Race)**	**White Non Hispanic**
Bernalillo	472,840	20,244	20,003	12,871	**525,958**	206,323	279,882
Sandoval	66,313	1,968	18,601	1,167	**88,049**	25,592	42,599
Santa Fe	117,145	1,223	3,931	1,087	**123,386**	63,173	55,860
New Mexico	1,503,470	45,124	162,686	25,651	**1,736,931**	700,289	834,364

TABLE 3-6

RACE AND ETHNICITY SUMMARY
(By County: in Percent)

	County			
	Bernalillo	**Sandoval**	**Santa Fe**	**New Mexico**
White	89.9	75.3	94.9	86.6
Black	3.8	2.2	1.0	2.6
American Indian	3.8	21.1	3.2	9.4
Asian Islander	2.4	1.3	0.9	1.5
Total	**100.0**	**100.0**	**100.0**	**100.0**
White Non-Hispanic	53.2	48.4	45.3	48.0
Non-Anglo	46.8	51.6	54.7	52.0
Total	**100.0**	**100.0**	**100.0**	**100.0**
Hispanic	39.2	29.1	51.2	40.3

Employment has been high, and unemployment rates have been low for counties in the proposed exchange area. The following information from the Bureau of Business and Economic Research (University of New Mexico, 1998) shows civilian labor force figures for Bernalillo County at 290,610, Sandoval County, 50,506, and Santa Fe County at 64,189. The unemployment rates were 4.4%, 5.2%, and 3.6%, respectively; the labor force figures equal 48.8 percent of New Mexico's (831,052) labor force. Overall, New Mexico has an unemployment rate of 6.6 percent.

The major employment sectors in the proposed exchange area in 1998 were services (33.7%), government (24.7%), and wholesale and retail trade (23.7%). Sandoval County had a higher level of employment in the service sector (42.6%) and less employment in the wholesale and retail trade sector.

Per capita income varied between Sandoval and the other counties. Sandoval County's $18,453 is 95.6 percent of the state's average of $19,298. Bernalillo County is 126.8 percent of the State average and Santa Fe is 131.9 percent. Income earned in the manufacturing sector leads all sectors, accounting for 26 percent of Sandoval County's personal income. Services lead the sectors for earned personal income in Bernalillo and Santa Fe Counties with 27 and 21 percent, respectively.

TABLE 3-7

PERSONAL INCOME
(By Major Source and Earnings and by Industry, 1997; in thousands of dollars)

Item	**County**			
	Bernalillo	**Sandoval**	**Santa Fe**	**New Mexico**
Income by Place of Residence				
Personal income	12,865,431	1,584,414	3,094,758	33,268,754
Nonfarm personal income	12,860,064	1,577,962	3,090,884	32,889,302
Farm income	5,367	6,452	3,874	379,452
Per capita personal income ($)	24,478	18,453	25,453	19,298
Derivation of Total Personal Income				
Earnings by place of work	10,220,252	819,220	1,914,128	23,007,975
less: personal contribution for social insurance	779,390	65,054	148,623	1,758,332
plus: Adjustment for residence	-875,421	388,957	175,006	72,697
equals: net earning by place of residence	8,565,441	1,143,123	1,940,511	21,322,340
plus: Dividends, interest, and rent	2,100,532	172,000	775,091	5,242,531
plus: Transfer payments	2,199,458	269,291	379,156	6,703,883
Earning By Place of Work				
Components of Earnings:				
Wage and salary disbursements	8,622,539	667,469	1,440,053	18,654,508
Other labor income	845,543	77,877	136,518	1,885,954
Proprietor's income	752,170	73,874	337,557	2,467,513
Farm proprietors	1,898	4,156	2,359	223,657
Nonfarm proprietor's	750,272	69,718	335,198	2,243,856
Earnings by Industry:				
Farm earnings	5,367	6,452	3,874	379,452
Nonfarm earnings	10,214,885	812,768	1,910,254	22,628,523
Private earnings	8,155,285	726,752	1,445,021	16,896,741

Ag.ser.forestry, fishing and other	49,871	3,484	11,894	161,424
Mining	29,453	1,103	13,379	820,183
Construction	733,715	72,999	152,939	1,618,325
Manufacturing	857,601	415,482	78,378	1,856,475
Transportation & Public utilities	570,148	15,556	42,507	1,365,762
Wholesale trade	636,766	13,602	51,066	974,177
Retail trade	1,102,823	73,277	276,071	2,590,123
Finance, insurance & real estate	647,812	22,045	172,151	1,164,347
Services	3,527,096	109,204	646+,636	6,345,925
Government & government enterprizes	2,059,600	86,016	465,233	5,731,782

The exchange area has had a long history of habitation by Native Americans, with a shorter period for Hispanics and an even shorter period for non-Hispanic Whites. Each group holds social and cultural values distinctly its own, but each group has been required to make accommodations for others, resulting in a colorful and diverse social setting. The area's population has had a consistent and substantial growth over the last few decades, with some shifts between the rural and urban areas.

The Albuquerque/Rio Rancho area has had rapid and consistent growth and is a service center to much of New Mexico. The resources of the exchange area, especially the Selected Lands, in close proximity to the large population center, have been used for recreation and open space.

Attitudes expressed by groups and individuals involved in the exchange process are diverse and relate for the most part to either their social and/or cultural values. Those who have used the land for their own recreational purposes recognize that they will no longer have the access to the lands that they have had under public ownership, and, while there would be other public lands received, these lands will not be as convenient to use.

Under the proposed exchange, the Pueblo people would have jurisdiction over lands that will allow them to control the use of areas of high traditional cultural value (see Table 3-8 for data on surface land ownership). In these situations, it is not likely that everyone will be satisfied with their decisions.

TABLE 3-8

PUEBLO LAND EXCHANGE DATA
(Surface Land Ownership)

County	All Federal	BLM	Tribal	Private	State	Total
Bernalillo	119,243	10,922	226,140	370,216	28,732	744,331
Sandoval	958,023	534,351	735,297	589,357	78,146	2,360,823
Santa Fe	327,698	74,233	84,925	720,230	81,681	1,214,534
Subtotal	1,285,721	608,584	820,222	1,309,587	159,827	3,575,357
Percent of Total	35.96	17.02	22.94	36.63	4.47	100.00

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

The environmental consequences of implementing each alternative are considered for the "selected" and, to the extent possible the "offered" lands. Only elements believed to be impacted by the actions required to implement the alternatives are given detailed consideration. Preliminary analysis indicates that climate, air quality, transportation, noise and prime and unique farmland do not require detailed analysis.

GENERAL ASSUMPTIONS AND GUIDELINES

1. Changes or impacts described and analyzed are short term (within a five-year period) unless otherwise stated; long-term impacts would occur after five years.
2. The management actions were analyzed under the assumption that all actions would be fully implemented after the land exchange occurred. The analysis also assumes that all of the Selected Lands except 1,400 acres which would be exchanged by the Pueblo into private ownership would eventually be managed by the BIA for the benefit of the San Felipe Pueblo, eventually as Indian Trust Lands (see Appendix F for definition). The lands to be acquired by the Pueblo in the private/Pueblo exchange would also be managed under the restrictive covenants. It was also assumed that the Offered Lands to be acquired by the BLM under this proposal would provide BLM improved manageability and accessibility to these lands.
3. In addition, it was assumed that adequate funding and manpower would be available to implement the management actions discussed in the Proposed Action Alternative or Alternative B.

LAWS AND EXPLANATION OF PROPOSED LAND EXCHANGE PROCESS

As described in detail in Chapter Two under the Proposed Action Alternative, the conveyed BLM lands would become Fee lands (see Appendix F) and eventually Indian Trust Lands to be managed by the BIA. While the lands are currently managed by the BLM as part of their mission (see Appendix A) and under the principles of multiple use and sustained yield for the benefit of the public, the San Felipe Pueblo and the BIA would manage the lands for the benefit of the Pueblo.

The Selected Land area is currently managed by the BLM under a number of Federal laws that would continue to be in effect if the proposed exchange is implemented. Many of these laws are concerned with environmental protection. Among these are the National Environmental Policy Act (NEPA) of 1976, the Theft of Government Property statutes (18 U.S.C. 641), the Endangered Species Act of 1973, the Archeological Resources Protection Act (ARPA) of 1979, the American Indian Religious Freedom Act of 1978, the Antiquities Act of 1906, and the National Historic Preservation Act (NHPA) of 1966. Stringent Federal mandates, including the Federal Land Policy and Management Act (FLPMA) of 1976 would also apply to the Offered Lands if they were acquired through the proposed exchange. (See Appendix C for a detailed description of these laws.)

The proposed exchange would consolidate ownership of public lands in high priority acquisition areas. In addition, by reducing mixed BLM ownership, the exchange would result in an improved land pattern within the Albuquerque Field Office and the Taos Field Office.

Acquiring the Offered Lands within high priority acquisition areas is a primary goal of the Rio Puerco and Taos RMPs (DOI, 1986 and 1988b). These acquisitions would improve BLM's manageability of these areas and their associated resources. As mentioned earlier, completing the proposed exchange would move toward achievement of BLM's land ownership consolidation goals by improving access and improving the manageability of these lands.

DETAILED IMPACT ANALYSIS BY RESOURCE

In the following impact analysis, individual resources described in Chapter Three (Affected Environment) are discussed, with impacts to both Selected Lands and Offered Lands affected by this proposed exchange.

Impacts to Ecological Sites/Vegetation(Selected and Offered Lands)

No environmental impacts to ecological sites and vegetative resources are anticipated from the proposed land exchange, other than what is included in the other resources portions of this chapter. After transfer to the San Felipe Pueblo, the Selected Lands would eventually be administered under the laws and policies pertinent to the BIA. Relevant regulations and policies from various BLM programs would guide the activities occurring on the acquired Offered Lands.

Impacts to Threatened, Endangered and Other Special Status Species (Selected and Offered Lands)

A Biological Assessment was prepared on the proposed action for all listed, proposed and candidate species that could potentially occur within the selected lands area (Refer to Appendix D). The determination of the Biological Assessment was that the proposed action would have a "No Affect" on all listed, proposed and candidate species due to lack of appropriate habitat to support any of the species within the exchange area.

Because a finding of "No Affect" was identified for all species involved, no formal concurrence on the determinations was requested from the U.S. Fish and Wildlife Service.

When the Offered Lands become BLM lands, they will be treated as other public lands and all requirements of the Endangered Species Act will be followed.

Impacts to Water Resources (Selected and Offered Lands)

As a result of the restrictive covenants in this exchange the San Felipe Pueblo would not promote any major surface-disturbing activity. There would be no new impacts to either surface- or ground-water resources from a change of ownership as a result of the exchange.

Water Rights. The water rights for 3 privately owned wells on BLM lands used for livestock water would be affected with a proposed change in land ownership. Under New Mexico water law, an appropriation water right is considered property and can be owned separately from the land. Conversely, on BLM lands, the water rights and land are separated by ownership. The appropriator owns only the right to use the water and not the water itself. There are conditions of amount, location, and time of use attached to the right. The right can be sold, traded, or transferred with approval of the New Mexico Office of the State Engineer, and, therefore, it has a market value.

In the proposed exchange, the private water rights on BLM land can be sold or traded on the open market, or they can be transferred to another location. If the rights are transferred to another location, the State Engineer may require that the abandoned well be plugged. Therefore, each water right affected by this proposed exchange will be handled on a case-by-case basis.

If the Pueblo purchases the water rights and continues with a grazing program, then the existing situation and impacts would continue. The amounts of water used for livestock are small and only temporarily affect the existing water table. If the water rights are transferred and the wells abandoned, then that small impact to the local ground-water aquifer would cease. However, the change in water table levels would probably not be measureable under either scenerio.

Impacts to Wildlife (Selected Lands)

Under the Proposed Alternative, wildlife habitat on the Selected Lands would no longer be managed under the guidelines of the Rio Puerco RMP (DO[illegible]86); however, eventually decisions affecting wildlife would be subject to NEPA since NEPA would apply under BIA's management. Hunting would probably be eliminated except for Pueblo members once the Pueblo or BIA assumed management of these lands.

The 1,400 acres of land that would go to a private developer would no longer be subject to NEPA. With residential building over time songbird habitat due to residential landscaping, bird feeders and water sources would attract bird species less likely to be seen in open rangelands. The total number of kinds of songbirds using the area is likely to increase. Wildlife species associated with open rangeland would be suppressed or eliminated as housing density increases. Public hunting would be eliminated as residential construction density increases.

Impacts to Wildlife (Offered Lands)

Wildlife habitat on the Offered Lands would be managed according to the guidelines established by the Rio Puerco and Taos RMPs (DOI, 1986 and 1988b). Specifically, BLM's management would seek habitat wildlife improvement or protection and would coordinate any actions to best suit the resources and uses of each area. BLM management objectives for wildlife are to maintain habitat diversity, sustain ecosystem integrity, enhance aesthetic values, preserve the natural environment, and provide old growth habitat. These objectives would be accomplished somewhat through habitat manipulation such as prescribed fire, mechanical thinning or and to a greater extent through mitigation established under NEPA, such as livestock fencing and livestock season of use.

Where the Offered Lands are within the boundaries of an ACEC, wildlife resources would be subject to the more detailed specifications of existing ACEC plans. Such plans provide a higher level of management and protection not presently exercised on the offered lands.

When acquired by BLM under the proposed plan, all Offered Lands would become subject to regulations under NEPA. Routine NEPA analysis is designed to provide greater detail regarding management actions than is currently required for the Offered Lands. NEPA also provides the BLM with the opportunity to coordinate and mitigate land use for the benefit of wildlife resources.

Impacts to Geology & Paleontology (Selected Lands)

No impacts to the geology of the Selected Lands would occur under the Proposed Action Alternative. Any known unique geological features present on the Selected Land area would be maintained under the San Felipe Pueblo ownership and eventually the BIA.

Impacts to Geology & Paleontology (Offered Lands)

Several of the Offered Land parcels contain paleontological resources that would be placed under Federal protection if the proposed exchange would occur.

Impacts to Mineral Resources (Selected Lands)

The restrictive covenants included under the Proposed Action Alternative would result in foregoing development of 38 million cubic yards of sand and gravel. Due to the limits of recovering the resources at a profit, as well as traditional and cultural conflicts present in this area, it would have been highly unlikely that all this material would ever have been mined by either BLM or the San Felipe Pueblo.

Impacts to Mineral Resources (Offered Lands)

Most of the Offered Lands that BLM would acquire as a result of this proposed land exchange would probably be incorporated into specially designated lands, such as an ACEC or an SMA. Consequently, no surface disturbance, including mining, would occur on these lands. Lands not within these areas would be subject to available resource development and federal regulations.

Impacts to Land Uses (Selected Lands)

The Selected Lands affected by the Proposed Action Alternative contain several historical access roads that are used by adjacent landowners to reach their private lands and access roads used to reach state lands. Through a letter to these landowners dated May 19, 1998, and at a subsequent meeting, the BLM requested landowners to mark these roads on a map to aid in mitigating landowner concerns about access (see Map 3). Landowner access would be established between individual landowners and the Pueblo. If agreement could not be reached BLM would issue rights-of-way for the historical roads prior to completing the exchange. The patent would be issued subject to the rights-of-way.

In addition to the private landowners' and the States' concerns over access, Sandoval County has requested a right-of-way for County Road 252A (formerly State Road 22), which was proposed for consideration under Revised Federal Statute 2477 right-of-way. Sandoval County would be granted a right-of-way before the proposed exchange would be completed.

Also, utility companies would need to negotiate directly with the San Felipe Pueblo instead of the BLM to obtain new rights-of-way after the proposed exchange is in effect. The Pueblo would likely have different requirements for right-of-way corridors than currently exist on public land. The two PNM power line rights-of-way currently within the existing designated corridor will be reserved in the patent and would continue to be managed by the BLM.

If the New Mexico Highway Department's study is concluded with an application for a right-of-way for the current County Road 252A a right-of-way will be considered after agreement between the NM Highway Department and the County.

A public right-of-way including a legal right-of-way through State land will provide access to the Ball Ranch ACEC.

Further impacts to current land uses as a result of Proposed Action Alternative would be that: State and county highway departments may not be able to obtain additional, needed rights-of-way for new roads. Additionally, the opportunity for state and local governments and non-profit organizations to obtain public lands through the Recreation and Public Purposes Act (R&PP; see Appendix C) at less than fair market value would be eliminated on the Selected Lands.

Approximately 9,460 acres under this Alternative of the Selected Lands would no longer be available for public land uses.

Impacts to Land Uses--(Offered Lands)

New rights-of-way activities would be restricted on the lands lying within areas specially designated for environmental and resource protection. New rights-of-way in areas outside the designated areas will be considered subject to NEPA and the RMP's. Existing authorized uses on the Offered Lands would be protected, such as current Federal mineral leases and valid existing rights-of-ways. Current right-of-way holders would be contacted and informed of the change of land ownership, and they would be encouraged to obtain new authorization from the BLM.

In some cases, state and county-maintained public roads and highways cross portions of the Offered Lands, providing access routes for the general public to outlying areas. However, due to the remote nature of many of these lands, these occurrences are minimal. Land acquired within a withdrawal area will be subject to the terms and conditions of that withdrawal.

Impacts to Wilderness (Selected Lands)

Under the proposed alternative, no impacts would occur to wilderness on the Selected Lands, as none of these lands are within or adjacent to designated wilderness areas or WSAs.

Impacts to Wilderness (Offered Lands)

Acquiring the private lands adjacent to or within WSA's would greatly enhance wilderness values and improve the BLM's ability to manage these areas to maintain their primitive nature.

Impacts to Recreation (Selected Lands)

As indicated in the Recreation section of Chapter Three, the use of these lands for recreational purposes has not been extremely high because of public access problems. However, the proposed transfer of the Selected Lands to the San Felipe Pueblo would likely eliminate the public's opportunities for recreational access to 9,460 acres of the proposed exchange study area. These Federal lands would no longer be available to members of the general public currently participating in noncommercial, noncompetitive and non-organized recreational activities on these Federal lands or to future users. Recreational access by the general public to the selected lands may or may not be allowed. It will depend on the land owners. The BLM would retain the other 1,447 acres of Federal lands. However, no legal public access is available to these lands.

Impacts to Recreation (Offered Lands)

Under the proposed action, the transfer of the Offered Lands to the BLM would add to the public recreation opportunities in those areas. Recreational use on any lands transferred to the BLM would become subject to the Federal rules and regulation governing the recreational use and occupancy of public lands, areas, sites, and facilities. When Offered Lands within the boundaries of an ACEC or WSA are transferred to BLM, recreational use would become subject to management prescriptions and policies established to protect the specific values found in these areas.

Impacts to Visual Resources (Selected Lands)

Under the proposed alternative, the overall impacts to visual resources on 8,060 acres of the Selected Lands would be reduced as a result of restrictive covenants placed on the Selected Lands. Provisions within the restrictive covenants were established by BLM and the Pueblo to preserve these substantially undisturbed Selected Lands in their natural state. It is assumed that the other 1,400 acres from the Selected Lands that are proposed to be exchanged by the Pueblo to private ownership would be developed. This is likely to result in some degree of landscape modification. The development activities on these privately owned lands would be regulated by the Sandoval and Santa Fe County zoning ordinances.

The exchange would reduce by 240 acres the VRM Class III lands and by 9,220 acres the VRM Class IV lands administered by BLM's Albuquerque Field Office. These two classes are considered to be of lower scenic quality and they allow for evident contrast to the basic landscape elements as a result of management activities. After the [proposed] transfer of the 9,460 acres of Selected Lands to the San Felipe Pueblo, visual resources management objectives established by the BLM through its classification system would no longer apply.

Impacts to Visual Resources (Offered Lands)

The Offered Lands that the BLM would acquire would become incorporated into the particular VRM Class assigned to the adjacent public lands. Several parcels of the Offered Lands are within the

45

boundaries or adjacent to areas assigned a VRM Class II. Acquisition of these lands would assist in maintaining the visual quality in these areas by providing control of surface and vegetative modifications.

Impacts to Hazardous Materials (Selected Lands)

An Environmental Site Assessment (ESA) was conducted on all lands affected by this EIS. They have been examined using the American Society for Testing and Materials (ASTM) protocols Standard Practice for Environmental Site Assessments: Transaction Screen Process) ASTM, 2000, and in accordance with Section 120(h) of the Superfund Amendments and Reauthorization Act (SARA). No evidence exists to indicate that any hazardous material (the term includes hazardous substances, wastes, or other materials) was stored for one year or more, disposed of, or released on the affected land exchange property.

Impacts to Hazardous Materials (Offered Lands)

If the proposed alternative is chosen and once lands are selected (see Map 4(a-e) , a hazardous materials survey would be conducted on the Offered Lands. Information from this survey report would provide the basis for a BLM decision to delete certain parcels from the proposed exchange (if hazardous materials were found), thus, causing no impacts regarding hazardous material management [on the Offered Lands portion].

Impacts to Cultural Resources (Selected Lands)

Under the proposed action, 9,460 acres of Federal land will be transferred to the Pueblo. Through a separate exchange 1,400 acres of the 9,460 acres will be exchanged for lands now in private ownership which includes Tonque Pueblo. It is anticipated that all of the lands acquired by San Felipe Pueblo as a result of these actions will be placed in Trust and managed by the BIA. Any cultural resources located on these lands would remain under the protection of the National Historic Preservation Act, the Archeological Resources Protection Act, and other Federal laws pertaining to cultural resources. BIA and the Pueblo would be obligated to provide the same level of protection to archeological and historic properties that they now receive under BLM management. These protections would also be extended to the private lands acquired by the Pueblo. In addition, restrictive covenants will be applied to all of these lands, ensuring long term protection of the resources from development-related impacts.

Under the proposed action approximately 1,400 acres of land currently administered by the BLM would eventually pass into private ownership. Cultural resources on these lands would no longer be subject to Federal laws which protect them from vandalism and inadvertent destruction. Prior to the exchange all cultural resources in these parcels will be identified through a Class III inventory, and appropriate measures to mitigate potential adverse impacts of the transfer of ownership will be developed in consultation with the New Mexico State Historic Preservation Officer.

Impacts to Cultural Resources (Offered Lands)

Cultural resources on lands which might be transferred to BLM through the San Felipe Exchange are currently under private ownership. State law prohibits excavation of human burials except under carefully controlled circumstances, but otherwise treatment of cultural resources on private lands is entirely at the discretion of the owner. Any cultural resources transferred to BLM under this proposal would become subject to Federal laws protecting them from vandalism and inadvertent destruction.

Impacts to American Indian Uses (Selected Lands)

If lands currently administered by BLM are transferred to the San Felipe Pueblo and held in trust by the BIA, then American Indian (Pueblo) traditional, historical, and cultural access and uses would be aided through the tribal governments' direct supervision. In addition, the privacy often required for these uses would be greatly enhanced.

Impacts to American Indian Uses (Offered Lands)

Under the proposed action, lands which are currently in private ownership would become public lands. In most cases this would enhance American Indian access for traditional, historical and cultural uses, although privacy for those uses could be reduced.

Impacts to Rangeland Management (Selected Lands)

Under the Proposed Alternative, the grazing permittees/allottees within the Selected Lands would be negatively affected by losing all or most of their grazing privileges, unless they negotiate an agreement with the San Felipe Pueblo. Only one operator would retain public land grazing privileges (within the Ball Ranch ACEC), amounting to about 30 percent of that operator's original allotment. After the exchange is completed, a short grace period would occur, allowing each livestock operator to finish the current year's grazing season so that they could then find other lands to graze their livestock on.

Under the Proposed Alternative, no impacts to livestock grazing would occur on the Selected Lands except for the economic impacts outlined in Table 3-9, which lists the number of livestock currently permitted for each allotment on the Selected Land area and the number of livestock that would be maintained after the land exchange occurred (based on BLM case files). These numbers, include the livestock permitted on the combined Federal, State and private lands. Approximately seven acres of land are required for forage of each animal per month. As shown, most of the permittees will experience changes in their allotments after the land exchange occurs.

TABLE 3-9

ANIMAL UNIT MONTHS (AUM's) PERMITTED - CURRENT ALLOTMENT & AFTER PROPOSED EXCHANGE

Allotment Name/ #	Current Allotment	After Proposed Santo Domingo Exchange	After Proposed San Felipe & Santo Domingo Exchanges
Ortiz Mountain/118	3,396	2,860	1,773
Tejon/120	3,307	2,671	2,671
Coyote Arroyo/121	480	359	359
Tonque Arroyo/119	123*	123	123

*Note: The Tonque Arroyo Allotment has a total capacity of 349 AUMs, however, the allotment is currently vacant and no permit has been issued for the Public Lands. Therefore, only the grazing capacity on the private lands is considered in the current allotment figure.

Allottees having Section 4 Permits under the Taylor Grazing Act (see Appendix C) have the option of salvaging range improvements, such as windmills, drinking troughs, fencing materials, etc., or requesting that BLM compensate them for the value of these improvements. Allottees having cooperative agreements with the BLM would not recoup the salvage value or the labor they have invested in range improvements.

Impacts to Rangeland Management (Offered Lands)

Under the proposed action, any lands acquired by BLM within an existing grazing allotment would be incorporated into the allotment. Lands outside existing allotments would have to be dealt with on a site specific basis. Adjacent land owners with base property could make application to graze these lands. Applications must meet the qualifications specified in 43 CFR 4110. BLM would make a decision on competing applications based on the factors found in 43 CFR 4130.1-2. BLM must also comply with NEPA by analyzing the site specific impacts of grazing before issuing a permit.

Under the proposed plan, the grazing permittee would benefit from the BLM's range improvement fund, which makes funds collected from grazing fees available for range improvements. In addition, the BLM has provisions for refunding grazing fees and for taking fee-free non-use of an allotment if approved by the authorized officer.

Impacts to Socio-Economic Conditions (Selected Lands)

The terms of the proposed exchange, which are intended to minimize the environmental impacts that are created, also require that BLM receive title to lands in areas identified in BLM's planning areas with special resources values in exchange for the Selected Lands. Under the proposed plan, the Pueblo would accept restrictive covenants on the Selected Lands which excludes surface-disturbing activities or development but does allow for grazing and traditional cultural practices to continue.

The Pueblo essentially would have uninterrupted use of the land for traditional cultural practices. Grazing would continue, but the tribe would issue the permits [instead of BLM], and they have the option to restrict use to the tribe or its members. If the Pueblo did not permit to the current BLM permittee he would likely continue to run livestock, but would have to compete for private or state land grazing. Having to compete for other grazing rights would be socially disruptive to those who have operated the same allotments for many years.

In addition, the public who currently use the Selected Lands for recreational and open space uses will have to find other areas to use, areas that probably would be less conveniently located.

Sandoval and Santa Fe Counties would likely have a reduction of in-lieu-of tax payments. Much of this would likely be replaced by offered lands acquired for Sandoval county. Santa Fe county's loss would be small. The non-development commitment under the restrictive covenants will not allow mineral material development, resulting in long-term loss of jobs and income. The 1998 Sandoval County mining jobs were few, less than 1% of the county's jobs and little personal income came from mining; therefore, non-development of mineral material under this proposed alternative would not cause a major impact.

Impacts to Socio-Economic Conditions (Offered Lands)

Under the proposed alternative, in lieu of tax payments would likely replace the payments lost for the Selected Land. They may not be paid to the counties that suffered the losses.

IMPACTS OF ALTERNATIVE B (Additional Acreage)

Impacts to Ecological Sites/Vegetation (Selected and Offered Lands)

As a result of the restrictive covenants and the Pueblo's commitment not to develop these land, vegetative and ecological site impacts would not occur.

Relevant regulations and policies from various BLM programs would guide the activities occurring on the acquired Offered Lands. Impacts to the Offered Lands would be the same as those described under the Proposed Action Alternative except that they would apply to more lands.

48

Impacts to Threatened, Endangered and Other Special Status Species (Selected and Offered Lands)

A preliminary assessment on the Selected Lands indicates that the Action proposed under Alternative B would have "No Affect" on all listed, proposed and candidate species due to lack of appropriate habitat to support any of the species within the exchange area. Because a finding of "No Affect" was identified for all species involved, no formal concurrence on the determinations would be requested from the U.S. Fish and Wildlife Service.

When the Offered Lands become BLM lands they will be treated as other public lands and all requirements of the Endangered Species Act will be followed.

Impacts to Water Resources (Selected and Offered Lands)

As a result of the restrictive covenants in this exchange the San Felipe Pueblo will not promote any major surface-disturbing activity. There would be no new impacts to either surface or ground water resources from a change of ownership [as a result of the action proposed under Alternative B].

Water Rights. The water rights for 3 privately owned wells on BLM lands used for livestock water would be affected with a proposed change in land ownership. Under New Mexico water law, an appropriation water right is considered property and can be owned separately from the land. Conversely, on BLM lands, the water rights and land are separated by ownership. The appropriator owns only the right to use the water and not the water itself. There are conditions of amount, location, and time of use attached to the right. The right can be sold, traded, or transferred with approval of the NM Office of the State Engineer, and, therefore, it has a market value.

In the proposed exchange, the private water rights on BLM land can be sold or traded on the open market, or they can be transferred to another location. If the rights are transferred to another location, the State Engineer may require that the abandoned well be plugged. Therefore, each water right affected by this proposed exchange will be handled on a case-by-case basis.

If the Pueblo purchases the water rights and continues with a grazing program, then the existing situation and impacts would continue. The amounts of water used for livestock are small and only temporarily affect the existing water table. If the water rights are transferred and the wells abandoned, then that small impact to the local ground-water aquifer would cease. However, the change in water table levels would probably not be measurable under either scenario.

Based on BLM's requirements to comply with [water laws] we do not anticipate activities on Offered Lands acquired by BLM that would negatively affect surface or ground water quality.

Impacts to Wildlife (Selected Lands)

Under the Alternative B, wildlife on the Selected Lands would no longer be managed under the guidelines of the Rio Puerco RMP (DOI, 1986); however, eventually decisions affecting wildlife would be subject to NEPA since NEPA would apply under BIA's management.

The impacts to wildlife on the lands that go to private ownership under this alternative would be the same as those under the proposed action.

49

Impacts to Wildlife (Offered Lands)

Wildlife habitat on the Offered Lands would be managed according to the guidelines established by the Rio Puerco and Taos RMPs (DOI, 1986 and 1988b). Specifically, BLM's management would seek wildlife resources improvement or protection and would coordinate any actions to best suit the resources and uses of each area. BLM's management objectives for wildlife are to maintain habitat diversity, sustain ecosystem integrity, enhance aesthetic values, preserve the natural environment, and provide old growth habitat. These objectives would be accomplished somewhat through habitat manipulation such as prescribed fire, mechanical thinning or fencing, and to a greater extent through mitigation established under NEPA, such as livestock fencing and livestock season of use.

Where the Offered Lands are within the boundaries of an ACEC, wildlife resources would be subject to the more detailed specifications of existing ACEC plans. Such plans provide a higher level of management and protection not presently exercised on the offered lands.

Lands acquired by BLM under Alternative B would become subject to regulations under NEPA. Routine NEPA analysis is designed to provide greater detail regarding management actions than is currently required for the Offered Lands. NEPA also provides the BLM with the opportunity to coordinate and mitigate land use for the benefit of wildlife resources.

Impacts to Geology & Paleontology (Selected and Offered Lands)

No impacts to the geology of the Selected Lands would occur under Alternative B. Any known unique geological features present on the Selected Land area would be maintained under the San Felipe Pueblo ownership.

Several of the Offered Land parcels contain paleontological resources that would be placed under Federal protection through the proposed exchange.

Impacts to Mineral Resources (Selected Lands)

The restrictive covenants included under Alternative B would result in foregoing development of 38 million cubic yards of sand and gravel. Due to the limits of recovering the resources at a profit, as well as traditional and cultural conflicts present in this area, it would have been highly unlikely that all this material would ever have been mined by either BLM or the San Felipe Pueblo.

Impacts to Mineral Resources (Offered Lands)

Most of the Offered Lands that BLM would acquire as a result of Alternative B would probably be incorporated into specially designated lands, such as an ACEC or an SMA. Consequently, no surface disturbance, including mining, would occur on these lands. Lands not within these areas would be subject to available resource development and Federal regulations.

Impacts to Land Uses (Selected Lands)

The Selected Lands affected by Alternative B contain several historical access roads that are used by adjacent landowners to reach their private lands. Through a letter to these landowners dated May 19, 1998, and at a subsequent meeting, the BLM requested landowners to mark these roads on a map to aid in mitigating landowner concerns about access (see Map 3). Landowner access would be established between individual landowners and the Pueblo. If agreement could not be reached BLM would issue rights-of-way for the historical roads prior to completing the exchange. The patent would be subject to the right-of-way.

In addition to the private landowners' and the States' concerns over access, Sandoval County has requested a right-of-way for County Road 252A (formerly State Road 22) and a quarter section of public land in the south end of the Ball Ranch (Alternative B). Sandoval County would be granted a right-of-way before the proposed exchange would be completed.

50

Utility companies would need to negotiate directly with the San Felipe Pueblo instead of the BLM to obtain new rights-of-way after the proposed exchange is in effect. The Pueblo would likely have different requirements for right-of-way corridors than currently exist on public land. The two PNM power line rights-of-way currently within the existing designated corridor will be reserved in the patent and would continue to be managed by the BLM.

If the New Mexico Highway Department's study is concluded with an application for a right-of-way for the current County Road 252A a right-of-way will be considered after agreement between the NM Highway Department and the County.

A public right-of-way including a legal right-of-way through State land will provide access to the Ball Ranch ACEC.

Further impacts to current land uses as a result of Alternative B would be that: State and county highway departments may not be able to obtain additional, needed rights-of-way for new roads. Additionally, the opportunity for state and local governments and non-profit organizations to obtain public lands through the Recreation and Public Purposes Act (R&PP; see Appendix C) at less than fair market value would be eliminated.

Approximately 10,907 acres under Alternative B of the Selected Lands would no longer be available for public land uses.

Impacts to Land Uses-(Offered Lands)

New rights-of-way activities would be restricted on the lands lying within areas specially designated for environmental and resource protection. New rights-of-way in areas outside the designated areas will be considered subject to NEPA and the RMP's. Existing authorized uses on the Offered Lands would be protected, such as current Federal mineral leases and valid existing rights-of-ways. Current right-of-way holders would be contacted and informed of the change of land ownership, and they would be encouraged to obtain new authorization from the BLM.

In some cases, state and county-maintained public roads and highways cross portions of the offered lands, providing access routes for the general public to outlying areas. However, due to the remote nature of many of these lands, these occurrences are minimal. Land acquired within a withdrawal area will be subject to the terms and conditions of that withdrawal.

Impacts to Wilderness (Selected and Offered Lands)

Under Alternative B, no impacts would occur to wilderness on the Selected Lands, as none of these lands are within or adjacent to designated wilderness areas or WSAs.

Acquiring the private lands adjacent to or within WSA's would greatly enhance wilderness values and improve the BLM's ability to manage these areas to maintain their primitive nature.

Impacts to Recreation (Selected Lands)

Impacts would be the same as Alternative A except an additional 1,447 acres of Selected Lands would be transferred.

Impacts to Recreation (Offered Lands)

Impacts would be the same as Alternative A except additional Offered Lands would be transferred under BLM control and would be available for recreational use.

51

Impacts to Visual Resources (Selected Lands)

Same as Alternative A except an additional 1,447 acres of Selected Lands that were under no approved VRM objectives would be placed under restrictive covenants.

Impacts to Visual Resources (Offered Lands)

Same as Alternative A except that the yet to be acquired Offered Lands that would be of equal value to the additional BLM selected lands, would be placed under BLM control.

Impacts to Hazardous Materials (Selected Lands)

An Environmental Site Assessment (ESA) was conducted on all lands affected by this EIS. They have been examined using the American Society for Testing and Materials (ASTM) protocols Standard Practice for Environmental Site Assessments: Transaction Screen Process) ASTM, 2000, and in accordance with Section 120(h) of the Superfund Amendments and Reauthorization Act (SARA). No evidence exists to indicate that any hazardous material (the term includes hazardous substances, wastes, or other materials) was stored for one year or more, disposed of, or released on the affected land exchange property.

Impacts to Hazardous Materials (Offered Lands)

If the alternative is chosen and once lands are selected (see Map 4(a-e) , a hazardous materials survey would be conducted on the Offered Lands. Information from this survey report would provide the basis for a BLM decision to delete certain parcels from the proposed exchange (if hazardous materials were found), thus, causing no impacts regarding hazardous material management [on the Offered Lands portion].

Impacts to Cultural Resources (Selected Lands)

Effects of a land exchange which included Alternative B lands would be generally the same as the proposed action, with one major exception. It is anticipated that all of the lands acquired by San Felipe Pueblo as a result of this action will be placed in Trust and managed by the BIA. Any cultural resources located on these lands would remain under the protection of the National Historic Preservation Act, the Archeological Resources Protection Act, and the Federal laws pertaining to cultural resources. BIA and the Pueblo would be obligated to provide the same level of protection to archeological and historic properties that they now receive under BLM management. Under the proposed action there would be a brief interval during which the Pueblo would own the lands in fee simple. A patent reservation (Appendix I) would ensure legal protection of cultural resources during this period. Access to the additional 1,447 acres added through Alternative B is the exception because lands is important to the descendents of the early Hispanic settlers in this area. It is a part of their cultural identity. If the Alternative B lands leave public ownership, it is likely that this group's access to those lands will be curtailed.

Impacts to Cultural Resources (Offered Lands)

Cultural resources on lands which might be transferred to BLM through the San Felipe Exchange are currently under private ownership. State law prohibits excavation of human burials except under carefully controlled circumstances, but otherwise treatment of cultural resources on private lands is entirely at the discretion of the owner. Any cultural resources transferred to BLM under this proposal would become subject to Federal laws protecting them from vandalism and inadvertent destruction.

Impacts to American Indian Uses (Selected Lands)

If lands currently administered by BLM are transferred to the San Felipe Pueblo and held in trust by the BIA, then American Indian (Pueblo) traditional, historical, and cultural access and uses would be aided through the tribal governments' direct supervision. In addition, the privacy often required for these uses would be greatly enhanced.

Impacts to American Indian Uses (Offered Lands)

Under the proposed action, lands which are currently in private ownership would become public lands. In most cases this would enhance American Indian access for traditional, historical and cultural uses, although privacy for those uses could be reduced.

Impacts to Rangeland Management (Selected Lands)

The impacts would be similar to those under Alternative A. The grazing permittees using the Selected Lands would be negatively impacted by losing some or most of their grazing capacity (refer to Table 3-9). In addition, two grazing lessees would lose their Public Land grazing privileges. For E. Gallegos Lease, number 796, this amounts to 180 AUMs. The M. Montano Lease, number 871, would lose 36 AUMs. The capacity remaining on private and State land is not calculated by the BLM on these Section 15 leases.

Impacts to Rangeland Management (Offered Lands)

Under Alternative B, any lands acquired by BLM within an existing grazing allotment would be incorporated into the allotment. Lands outside existing allotments would have to be dealt with on a site specific basis. Adjacent land owners with base property could make application to graze these lands. Applications must meet the qualifications specified in 43 CFR 4110. BLM would make a decision on completing applications based on the factors found in 43 CFR 4130.1-2. BLM must also comply with NEPA by analyzing the site specific impacts of grazing before issuing a permit.

Under the Alternative B, the grazing permittee would benefit from the BLM's range improvement fund, which makes funds collected from grazing fees available for range improvements. In addition, the BLM has provisions for refunding grazing fees and for taking fee-free non-use of an allotment if approved by the authorized officer.

Additional AUM's of forage would be available to permittees with adjoining lands. The AUM's gained would off set the loss but would impact different permittees. Little difference in total forage would result but the permittees who lose AUM's would not likely be the same permittees who would gain forage.

Impacts to Socio-Economic Conditions (Selected Lands)

The terms of the proposed exchange, which are intended to minimize the environmental impacts that are created, also require that BLM receive title to lands in areas identified in BLM's planning areas with special resources values in exchange for the Selected Lands. Under this alternative, the Pueblo would accept restrictive covenants on the Selected Lands which excludes surface-disturbing activities or development but does allow for grazing and traditional cultural practices to continue.

The Pueblo essentially would have uninterrupted use of the land for traditional cultural practices. Grazing would continue, but the tribe would issue the permits [instead of BLM], and they have the option to restrict use to the tribe or its members. If the Pueblo agrees, the current BLM permittee would likely continue to run livestock, but they would have to compete for private or state land grazing. Having to compete for other grazing rights would be socially disruptive to those who have operated the same allotments for many years.

In addition, the public who currently use the Selected Lands for recreational and open space uses will have to find other areas to use, areas that probably would be less conveniently located.

Sandoval and Santa Fe Counties would likely have a reduction of in-lieu-of tax payments. Much of this would likely be replaced by offered lands acquired for Sandoval county. Santa Fe county 's loss would be small. The non-development commitment under the restricted covenants will not allow mineral material development, resulting in long-term loss of jobs and income. The 1998 mining jobs were few less than 1% of the county's jobs and little personal income was generated; therefore, non-development of mining material under this alternative would not cause a major impact.

Impacts to Socio-Economic Conditions (Offered Lands)

Under Alternative B, in lieu of tax payments would likely replace the payments lost for the Selected Land. They may not be paid to the counties that lost payments on the Selected Lands..

IMPACTS OF THE NO ACTION ALTERNATIVE (SELECTED AND OFFERED LANDS)

The No Action Alternative would have no effect on any Federal grazing leases, oil and gas leases, or rights-of-way, since administrative jurisdiction currently in place would remain the same. The status of the affected Selected Land area would remain unchanged.

Under the No Action Alternative, the Offered Lands [identified for exchange under the Proposed Action Alternative] would not be acquired and the existing mixed land pattern, with Offered Land sections intermingled within blocks of public land, would continue. These lands would not become BLM lands within high priority acquisition areas or adjacent to WSAs, ACECs, SMAs, and riparian areas. Therefore, the opportunities to enhance management of these areas through consolidation would be delayed. Additional opportunities to protect primitive recreational opportunities, wildlife, scenic and wilderness values, and cultural resources under Federal law would also be foregone.

Listed in the following section are more specific impacts related to the No Action Alternative which apply to both the Selected and Offered Lands.

Impacts to Ecological Sites/Vegetation

The ecological sites and vegetative resources within the proposed exchange area would remain unaffected under the No Action Alternative. Existing uses such as livestock grazing and recreation would continue on these lands. Range improvements would remain the responsibility of the current Federal grazing permittees.

Impacts to Threatened, Endangered and Other Special Status Species

Rejection of the Alternative A and Alternative B would have no effect on special status plants or animals. Therefore, the present biological conditions would remain essentially the same.

Impacts to Water Resources

Implementation of the No Action Alternative would have no effect on the watershed or on currently held water rights.

Impacts to Wildlife

Under the No Action Alternative, the existing land pattern would remain as it is, and numerous opportunities to block up lands and to better manage wildlife habitat in WSAs, ACECs, riparian areas, and SMAs through consolidation would be foregone.

Impacts to Geology/Minerals/Paleontology

Rejection of the Proposed Action Alternative would keep the selected area's mineral estate within the jurisdiction of the Federal government and the public. Since the Reasonable Foreseeable Development potential for mining minerals other than sand and gravel is low, minimal effect would occur from mining or developing these commodities.

However, the sand and gravel resources could then be mined under the pertinent Federal regulations, and the potential royalties would benefit the public. The Federal government and the American public would benefit from royalties that could be generated from mining as much as 38 million cubic yards of

54

sand and gravel resources. However, due to limits of economic recovery as well as Pueblo traditional and cultural conflicts present in this area, it would be unlikely that all this material would ever be mined by the BLM.

Because the exchange would not occur under the No Action Alternative, the mineral estate and the paleontological resources on the Offered Lands would not come under Federal jurisdiction and protection and surface disturbance could occur. Private land owners could use or dispose of these resources as they wish.

Impacts to Land Uses

Current access by private landowners would be maintained across public lands under the No Action Alternative. However, only about 5,000 of the 10,900 acres of public land would continue to be accessible in the Selected Land area. Utility companies would work with BLM to obtain new rights-of-way. As neighboring communities grow, the opportunity for state and local governments and non-profit organizations to obtain public lands through the Recreation and Public Purposes Act (R&PP) would occur at less than fair market value for parks, schools, etc.

Impacts to Wilderness

The No Action Alternative could affect wilderness resources by the present landownership patterns within and adjacent to WSAs remaining unchanged, perpetuating associated management problems. Opportunities to further enhance WSA management through consolidation would be postponed.

Impacts to Recreation

The BLM retaining the exchange area lands would allow continued recreational opportunities within the area. However, the enhanced recreational opportunities resulting from consolidating land ownership in the specially managed areas now in private ownership would be postponed.

Impacts to Visual Resources

The lower quality VRM Class III and IV lands in the proposed exchange area would remain essentially unaffected under the No Action Alternative. Opportunities to strengthen visual resources management in the specially managed areas by acquiring higher quality Class II lands would be foregone.

Impacts to Hazardous Materials

Implementation of the No Action Alternative would have no effect on hazardous materials.

Impacts to Cultural Resources (Selected Lands)

Rejection of the Proposed Action Alternative would have no effect on cultural resources within the exchange lands. As described perviously in this chapter, these lands would receive the same level of protection whether managed by BLM or by BIA and the Pueblo, since Federal laws and regulations would still apply.

Impacts to Cultural Resources (Offered Lands)

Private landowners would continue to manage cultural resources at their own discretion.

Impacts to American Indian Uses (Selected Lands)

If the proposed exchange were not completed, American Indian traditional, historical, and cultural access and uses would continue to be impeded by a mixed pattern of land ownership and lack of privacy, which probably would increase because of the ever-growing population in nearby areas.

Impacts to American Indian Uses--(Offered Lands)

Access for and protection of American Indian traditional, historical, and cultural uses would continue to be subject to the discretion of private landowners.

Impacts to Rangeland Management (Selected Lands)

Choosing the No Action Alternative would have no effect on existing livestock grazing uses. The grazing leases would continue to be managed by the BLM, and the allottees would not be adversely affected by losing all or most of their grazing privileges. In addition, there would be no need for the allottees to negotiate agreements with San Felipe Pueblo.

Impacts to Socio-Economic Conditions (Selected and Offered Lands)

Under the No Action Alternative, the Pueblo people's use for traditional cultural practices would continue to be interrupted by recreational uses of the public who use the area as open space primarily for recreational purposes. Neither the Pueblo use nor the public use is documented specifically nor has the use been quantified; the conflicts that exist have probably existed for some time and have been tolerated. The increased concentration of population and development in the area undoubtably intensifies the conflicts.

Two utility rights-of-way extend through the Selected Lands and monitoring and maintenance there (under the No Action Alternative) would also conflict with traditional cultural practice unless there is close coordination between the utility companies and the Pueblo leaders. Additional rights-of-ways would likely be approved, adding to any present conflicts.

Four livestock grazing allotments are authorized on the Selected Lands and 4,665 animal unit months of livestock grazing are used by livestock operators who have social values associated with the ranching lifestyle. Permits for livestock grazing would continue under this alternative, and the ranching lifestyle would be maintained.

Other economic activities such as mining and real estate subdivision developments would cause additional opportunities for interference with traditional cultural practices.

Under the No Action Alternative, grazing would likely continue at current levels, producing small amounts of income for a few operators. The economic impact likely to be most noticeable would occur in sand and gravel development, as the area's proximity to growing population centers contribute to the growing demand for mineral materials. While the dollar numbers from increased mining would not likely be large, this development would have positive economic impacts. However, the 1997 mining economic sector contributed less than one percent of Sandoval County's jobs and personal income.

The in-lieu-of-tax payment would not change.

SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

This section identifies the trade-offs between short-term use and long-term productivity of the resources involved in the Proposed Action Alternative. For this analysis, short term refers to the period involved for implementing the plan (within approximately five years), and long term refers to more than 5 years.

Short term use would not interfere with potential for long term productivity for any of the alternatives.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the proposed action alternative the 9,460 acres of Selected Lands would be held under restrictive covenants. Based on the requirements of these covenants there would be no irreversible or irretrievable commitment of resources. However, on these 9,460 acres fewer people would have direct access.

Under Alternative B the 10,907 acres of Selected Land would be held under restrictive covenants. Based on the requirements of covenants there would be no irreversible or irretrievable commitment of resources, however, on these 10,907 acres fewer people would have direct access.

Under Alternative C there would be no land exchanged and there would likely be development of sand and gravel on public lands. This mining of sand and gravel would create an irreversible commitment of the sand and gravel resource.

There would be no irreversible or irretrievable commitment of resources on the Offered Lands under any of the alternatives unless commitment of lands to the wilderness system is considered an irreversible commitment of resources.

CUMULATIVE IMPACTS (SELECTED LANDS)

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Under the proposed action alternative the Selected Lands would eventually become Tribal Trust Lands. The management and development of the these lands would still occur under applicable Federal laws as well as the requirements of the Tribal Government. The restrictive covenants are expected to avoid activities that would create impacts that might be cumulative for most resources. In Sandoval County BLM administered public lands available for public uses would be reduced as a result of proposed land exchanges by between .2 percent and 1.4 percent depending on the alternative selected. The County could also have a reduction of payments-in- lieu-of-tax payments ranging from .06 percent to .31 percent depending on alternative selected and location of offered lands. These impacts are of negligible magnitude. Another cumulative impact is the sand and gravel resources that are being withheld from use as a result of the restrictive covenants applied to the Selected Lands. The selection of the proposed action under the two exchanges would result in approximately 84 percent of estimated sand and gravel resource being unavailable for development. The selection of the alternative B under the two exchanges would result in approximately 68 percent of estimated sand and gravel resource being unavailable for development. The selection of the no action alternative under the two exchanges would result in none of estimated sand and gravel resource being unavailable for development.

The employment and income foregone as a result of the unavailable sand and gravel would not be a large figure on an annual basis but would be a long-term loss of job and income.

Impacts to Recreation

As indicated in Chapter Three (Recreation section), the use of these lands for recreational purposes has not been extremely high [to date] because of public access problems within the Selected Lands. However, the proposed transfer of the Selected Lands to the San Felipe Pueblo would more than likely eliminate the public's opportunities for motorized recreational access to about 2,700 acres presently available to non-motorized recreational activities. Noncommercial, noncompetitive and non-organized group recreational activities on Federal lands are currently available to the public free of charge. The Pueblo would determine future recreational access.

Impacts to Visual Resources

Transferring 9,459 acres of public land to the San Felipe Pueblo and the [proposed] transfer of 7,375 adjacent acres to the Santo Domingo Pueblo would result in the loss of approximately 240 acres of VRM Class III lands and 16,595 acres of VRM Class IV lands. However, the BLM would retain approximately 6,167 acres of VRM Class IV lands adjacent to these transferred lands. Restrictive Covenants applied to the transferred lands would benefit visual resources more than what currently exists under the BLM's VRM Class IV management objectives assigned to these lands resulting from restrictive covenants contained in the easement on the development and allowable modifications of these lands.

Impacts to Socio-Economic Conditions

Cumulative impacts of two proposed land exchanges including the additional lands under Alternative B, exclude public access to approximately 16,836 acres of land in the proposed exchange. Another 13,924 acres are being acquired by the Santo Domingo land acquisition associated with the Tent Rocks area, bringing the total acreage from which the public access would be excluded to 30,760 acres. The Pueblo people would have an additional 30,760 acres on which they control surface use, and, therefore, they would have increased opportunities to carry on their traditional cultural practices.

Impacts to Environmental Justice

The San Felipe Pueblo people are a minority [in New Mexico] and low income. The proposed alternative would positively affect them. They will be in control of an additional 9,460 acres of land used for traditional cultural practices, and they will also have additional jobs and economic resources. There has been consistent consultation with the Pueblo regarding this proposed land exchange. Impacts to the Pueblo are expected to be positive for them.

CUMULATIVE IMPACTS (OFFERED LANDS)

Most of the Offered Lands affected by this Proposed Action Alternative are used for livestock grazing, recreation, roads, power lines, and rights-of-way for communication systems. Once the proposed exchange is in effect, the lands within the WSAs would be managed under the Interim Management Policy for Lands Under Wilderness Review (U.S. DOI, BLM, 1995). The BLM would honor all valid existing rights. The lands not within WSAs would be managed under the management prescriptions of the ACEC plans and the RMPs.

CHAPTER 5

CONSULTATION AND COORDINATION

INTRODUCTION

This chapter describes the consultation and coordination activities the BLM has carried out while preparing this DEIS. Public comments on the draft and BLM responses to them will be included in this chapter of the Final EIS.

Consultation and coordination have occurred in a variety of ways throughout the EIS process. Both formal and informal efforts have been made to involve the public, other Federal agencies, American Indian (Pueblo) tribal groups, and State and local governments. More detailed documentation of this effort is on file at BLM's Albuquerque Field Office, as is a complete list of all those contacted.

CONSULTATION REGARDING WILDLIFE

The BLM must consult with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act of 1973 (see Appendix C) before any agency project is initiated that may affect any federally listed, threatened, endangered and other special status species or its habitat. This proposed land exchange is considered a major Federal action, so the BLM initiated informal consultation with the FWS.

The Biological Assessment for this DEIS (see Appendix D) found that the Proposed Action Alternative would have "No Effect" on all listed, proposed and candidate species due to the lack of appropriate habitat to support any of the species within the affected area. Because a finding of "No Effect" was identified for all species involved, no formal concurrence on the determinations was requested from the FWS.

CONSISTENCY WITH OTHER PLANS

BLM planning regulations require that plans be consistent with officially approved or adopted resource-related plans, policies, and procedures of other Federal agencies, American Indian tribes, and State and local governments. To ensure such consistency, the BLM has sent letters to all the groups and agencies listed in Table 1; these same entities have received copies of this DEIS for their comments.

No inconsistencies are known between any of the plan alternatives and officially approved and adopted, resource-related plans of any of the above-mentioned groups. The BLM will continue to consult and coordinate during the public comment periods on the EIS.

PERSONS AND AGENCIES CONSULTED (PUBLIC PARTICIPATION)

Public participation in this DEIS is a dynamic process that continues throughout the EIS process. In addition to formal public participation, informal contact occurs frequently with public land users and interested parties. All applicable public participation is documented and analyzed in the EIS process and kept on file in the field office.

Public involvement is essential to the success of the EIS; although public input is always welcome, BLM provided these specific opportunities for public comment (beginning with background taken from the Ball Ranch Exchange Environmental Assessment (EA; Sept., 1998, BLM.):

A Notice of Exchange Proposal (NOEP) was published in the *Albuquerque Journal* and *The Santa Fe New Mexican* for four consecutive weeks beginning on April 30, 1996. This publication notified the public of the proposal identified in Chapter 2 under Proposed Action Considered but Dropped. A Notice of Decision was also published from February 7 through March 3, 1997. An amended Notice of Decision was published on April 29, through May 20, 1998. This notice was withdrawn and a Notice of Exchange Proposal was published on July 20 and 27 and August 3 and 10, 1998. The EA was published in September 1998.

To begin the DEIS process, letters were sent to interested parties on Nov. 4, 1999, which informed them that BLM was considering two new land exchange proposals involving the San Felipe and Santo Domingo Pueblos (which superseded the original three-way proposal with the State of New Mexico included). A Notice of Exchange Proposal (NOEP)/Notice of Intent (NOI) to complete an environmental analysis was published in the Albuquerque Journal (Nov. 8, 15, 22, and 29, 1999) and the Federal Register (Nov. 9, 1999). The scoping period ended 45 days after publication in the Federal Register (on or about Dec. 27, 1999).

The public was invited to either submit comments on the scoping comment sheet enclosed with their letter or to attend an open house which was held at the BLM's Albuquerque Field Office on Dec. 2, 1999 (or to do both). BLM personnel were available at the open house to answer pertinent, specific questions and detailed maps were available there for review of the proposed land exchange. (The scoping process also included a news release about the proposed exchange.)

On June 28, 2000, another letter was sent to interested parties informing them that the BLM was amending the NOI and the NOEP from November 1999. The amendment added an additional 1,447 acres, more or less, to the Federal lands being considered for exchange to the San Felipe Pueblo (this was considered a new alternative to the DEIS). Again, the amended NOEP/NOI was published in the Albuquerque Journal and the Federal Register the end of June 2000, and the scoping period on the amendment ended 45 days after publication in the Federal Register.

Individuals and organizations consulted during the exchange process include those in Table 5-1. The BLM staff members who prepared this DEIS are listed in Table 5-2. Correspondence letters received on public notices (as of Jan. 5, 2000, are listed on the Index following Table 5-2.

TABLE 5-1

INDIVIDUALS AND ORGANIZATIONS CONSULTED

Organization	Specialists
San Felipe Pueblo	Former Tribal Administrator, Doris Sandoval Former Governor, Anthony Ortiz Former Governor, Sam Candelaria Governor, Lawrence Troncosa David Gomez, Attorney Members of the Tribal Council, Lands Committee and War Chiefs
New Mexico Historic Preservation Division	Lynne Sebastian, Elizabeth Oster
New Mexico State Land Office	Olivia Ximenes, Assistant Land Commissioner
U.S. Fish and Wildlife Service	Anne Cully
New Mexico Department of Game and Fish	Bill Montoya
New Mexico Highway Department	Paul Martinez, Mike Pope
Public Service Company of New Mexico	Bill Halpin, Scott Berger, Dave Kirkland
The Nature Conservancy	Bill Waldman
San Pedro Land Grant	Moises Gonzales, Roberto Gonzales

60

TABLE 5-2

LIST OF PREPARERS

Bureau of Land Management, Albuquerque Field Office	Specialists
Debby Lucero	Project Coordinator
Dan Armstrong	Rangeland Management Specialist
M'Lee Beazley	Desk top Publishing/Printing Specialist
John Gilmore	Geologist
Kent Hamilton	Community Planner/EA Coordinator
Randy Legler	Biologist
Brian Lloyd	Physical Scientist
John Roney	Archeologist
David Sitzler	Mining Engineer
Jerry Wall	Soils Scientist
John Bristol	Outdoor Recreation Planner
Jim Silva	Biologist
Steve Fischer	Watershed Team Lead

See Mailing List (Appendix G) for rights-of-way holders, landowners, interested Federal, State and local agencies, and individuals who expressed an interest in receiving information about this proposed exchange.

TABLE 5-3
INDEX
SAN FELIPE/SANTO DOMINGO LAND EXCHANGES
COMMENTS RECEIVED DURING PUBLIC SCOPING

Date of Correspondence	Date Received by BLM	Name/Title of Correspondence	Organization Represented
November 17, 1999	November 17, 1999	Rob Roberts	PNM - Gas & Electric Service
November 21, 1999	November 24, 1999	Frances Newsom	Landowner
November 26, 1999	November 26, 1999	K. Lynn Berry	NM State Hwy & Transportation Department
November 26, 1999	November 26, 1999	Pat D. Montoya	Heirs of La Majada Grant
December 2, 1999	December 2, 1999	Michelle Gallegos	Plains Electric G&T
December 6, 1999	December 8, 1999	Paul P. Martinez	NM State Hwy & Transportation Department
December 8, 1999	December 10, 1999	William R. Waldman	The Nature Conservancy of NM
December 21, 1999	December 27, 1999	D.N. (Dave) Daupert	Equilon Pipeline Co.
December 21, 1999	December 29, 1999	Phillip Chappell	Recreation User
December 21, 1999	December 21, 1999	Cecil Carnes, Jr.	Landowner
December 28, 1999	December 27, 1999	John F. McCarthy, Jr.	Attorney for Mr. & Mrs. Edmund Ball
December 28, 1999	December 28, 1999	Alfred L. Baca	Landowner
December 29, 1999	December 30, 1999	Commissioner Ray Powell	NM State Land Office
December 30, 1999	December 30, 1999	John P. Salazar	Attorney representing Diamond Tail Ranch
December 30, 1999	December 30, 1999	Carol M. Parker	Landowner in Placitas
January 4, 2000	January 4, 2000	Stephen L. McDowell	Public Land User
May 2, 2000	May 2, 2000	Paul P. Martinez	NM State Hwy & Transportation Department
May 31, 2000	May 31, 2000	Paul P. Martinez	NM State Hwy & Transportation Department
August 2, 2000	August 3, 2000	John P. Salazar	Attorney representing Diamond Tail Ranch
August 11, 2000	August 14, 2000	John P. Salazar	Attorney representing Diamond Tail Ranch
August 14, 2000	August 15, 2000	John F. McCarthy, Jr.	Attorney for Mr. & Mrs. Edmund Ball
August 30, 2000	August 31, 2000	John P. Salazar	Attorney representing Diamond Tail Ranch

62

September 5, 2000	September 6, 2000	Mike Aaron	Public Land User - Recreation
September 19, 2000	September 22, 2000	Edward W. (Bill) Halpin	PNM
September 21, 2000	September 22, 2000	John P. Salazar [National Assoc. of Industrial and Office Properties]	Attorney representing Diamond Tail Ranch
September 21, 2000	September 22, 2000	Milton S. Seligman	Landowner
September 27, 2000	September 28, 2000	John P. Salazar	Attorney representing Diamond Tail Ranch
September 27, 2000	September 28, 2000	John P. Salazar [Albuq. Economic Forum]	Attorney representing Diamond Tail Ranch
October 10, 2000	October 11, 2000	John P. Salazar	Attorney representing Diamond Tail Ranch
November 1, 2000	November 2, 2000	John P. Salazar [Greater Albuq. Chamber of Commerce]	Attorney representing Diamond Tail Ranch
November 8, 2000	November 9, 2000	John P. Salazar [Home Builders Assoc. of Central NM]	Attorney representing Diamond Tail Ranch
November 21, 2000	November 22, 2000	John P. Salazar [Albuq. Hispano Chamber of Commerce]	Attorney representing Diamond Tail Ranch
December 5, 2000	December 8, 2000	Rob Roberts	PNM

APPENDIX A

MISSION OF THE BUREAU OF LAND MANAGEMENT

The Bureau of Land Management (BLM) administers public lands within a framework of numerous laws. The most comprehensive of these laws is the Federal Land Policy and Management Act of 1976 (FLPMA). All Bureau policies, procedures, and management actions must be consistent with FLPMA and the other laws that govern use of the public lands--it is the mission of BLM to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

(BLM is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the need of the American people. Management is based upon the principles of multiple use and sustained yield, a combination of uses that takes into account the long-term needs of future generations for renewable and non-renewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural, scenic, scientific, and cultural values.)

APPENDIX B

ACRONYMS

ACEC	Area of Critical Environmental Concern
ARPA	Archeological Resources Protection Act
ASTM	American Society for Testing and Materials
AUM	animal unit month
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
FLEFA	Federal Land Exchange Facilitation Act (Aug. 20, 1988)
FLPMA	Federal Land Policy & Management Act (1976)
IBLA	Interior Board of Lands Appeal (Department of)
MOU	Memorandum of Understanding
NOD	Notice of Decision
NAGPRA	Native American Grave Protection & Repatriation Act
NEPA	National Environmental Policy Act of 1969
NOEP	Notice of Exchange Proposal
NOI	Notice of Intent
NPS	National Park Service
NTP	Notice to Proceed
PL	Public Law
RMP	Resource Management Plan
ROW	Right-of-Way
R&PP	Recreation and Public Purposes (Act
RPRA	Rio Puerco Resource Area (Albuquerque Field Office)
SARA	Superfund Amendments and Reauthorization Acts (of 1986)
SLO	State Land Office (New Mexico)
SMA	Special Management Area
TUA	Temporary Use Area
USDI	United States Department of the Interior
VRM	Visual Resource Management
WSA	Wilderness Study Area

APPENDIX C

MAJOR LAWS AND REGULATIONS GOVERNING PROPOSED LAND EXCHANGE AREA DEIS

(law/year/summary)

American Indian Religious Freedom Act of 1978 (P.L. 95-341). This Act makes it a policy of the government to protect and preserve for American Indians, Eskimos, Aleuts, and Native Hawaiians their inherent right of freedom to believe, express, and exercise their traditional religions. It further directs various Federal agencies, etc., responsible for administering relevant laws to evaluate their policies and procedures in consultation with Native traditional regligious leaders to determine changes necessary to protect and preserve Native American cultural and religious practices.

Antiquities Act of 1906 (43 CFR 3, 34 Stat. 225). This act was the first general act providing protection for archeological resources. It protects all historic and prehistoric sites on Federal lands and prohibits excavation or destruction of such antiquities without the permission of the Secretary of the Department having jurisdiction.

Archeological Resources Protection Act (ARPA) of 1979 (P.L. 96-95). This act supplements the provisions of the Antiquities Act and makes it illegal ot excavate or remove from Federal or Indian lands any archeological resources without a permit from the land manager. . . those resouces excavated from Indian lands remain the property of the Indian or Indian Tribe having rights of ownership over such resources.

BLM's Wilderness Management Policy of 1983. Governs how BLM manages lands administered by BLM which are designated by Congress as part of the National Wilderness Preservation System (established by the Wilderness Act [Act of Sept. 3, 1964]. It applies to public lands specially designated as wilderness by an Act of Congress (it closely parallels the U.S. Forest Service's wilderness management policy).

Clean Air Act (42 U.S.C. 7401) and Amendments of 1970. The main purpose of this act was to . . . "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population. . ." and "to encourage and assist the development and operation of regional air pollution control programs. It requires the EPA to publish national primary standards to protect public health and more strigent national secondary standards to protect public welfare (40 CFR 50). States which are divided into air quality control regions and local governments are responsible for prevention and control of air pollution.

Cooperative Agreement for Range Improvement (4120.3-2). Taylor Grazing Act of specifies the shared cost of a project, and title to a structural or removable project is shared by the United States and the permittee. Title to non-structural or non-removable projects is held solely in the name of the United States.

Endangered Species Act of 1973 (P.L. 93-205). The purpose of this act is to provide protection for animal and plant species that are currently in danger of extinction (endangered) and those that may become so in the foreseeable future (threatened). Section 7 of the act requires Federal agencies to ensure that all federally associated activities within the U.S. do not have adverse impacts on the continued existence of threatened or endangered species or on designated areas (critical habitats) that are important in conserving those species. Agencies must consult with the U.S. Fish and Wildlife Service to determine the potential impacts a project may have on protected species.

Federal Land Exchange Facilitation Act (FLEFA) of August 20, 1988 (amended FLPMA). Contains provisions to facilitate and expedite land exchanges by establishing uniform rules and regulations for appraisals, and procedures and guidelines for resolution of appraisal disputes.

Federal Land Policy and Management Act (FLPMA) of 1976 (P.L. 94-579, 90 Stat. 2743). This law requires several actions including land use planning and coordination with State and local governments. Section 102 (a)(1) states that, "the public lands be retained in Federal ownership, unless as a result of the land use planning procedures provided for in this Act, it is determined that disposal of a particular parcel will serve the national interest."

Interim Management Policy For Lands Under Wilderness Review of 1995. The purpose of the policy is to guide BLM staff in the specific decisions that arise every day in the management of lands under wilderness review.

National Environmental Policy Act (NEPA) of 1969 (P.L. 91-190, as amended by P.L. 94-52 and P.L. 94-83). The main purposes of the act were to declare a national policy which encourages productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

National Historic Preservation Act (NHPA) of 1966 (P.L. 89-665), as amended (P.L. 95-515). This act establishes as Federal policy the protection of historic sites and values in cooperation with other nations, States, and local governments and establishes a program of grants-in-aid to States for historic preservation activities. Federal agencies are required to consider the effects of their undertakins on historic resources and to give the President's Advisory Council a reasonable opportunity to comment on those undertakings.

Recreation and Public Purposes Act of 1954. Authorizes the Secretary of the Interior (under special conditions) to sell or lease public domain lands to State and local governments and to qualified non-profit organizations for recreation and other public purposes such as campgrounds, schools, fire houses, landfills, parks, law enforcement, facilities etc.

Superfund Amendments and Reauthorization Act of 1986 (SARA; P.L. 99-499). This act extensively amends the Superfund Act of 1980. Its major goals include more stringent and better defined cleanup standards, emphasizing remedial actions that permanently and significantly reduce hazardous situations. It requires EPA to revise the Hazard Ranking System to more accurately reflect the degree of risk to human health and the environment. SARA adds damage to natural resources and contamination of ambient air as criteria to be considered in evaluating potential hazards.

Taylor Grazing Act of 1934 (as amended [43 U.S.C. 315]); Section 4 (August 28, 1937 [43 U.S.C. 1181(d)] Range Improvement Permit) Taylor Grazing Act of 1934 (as amended [43 U.S.C.315]); - The primary purpose of the act was to stop continuing injury to the public rangelands through overgrazing, soil deterioration, and other misuse of the natural resources of this vast area mainly in the West. The act also authorized establishment of grazing district--a total area of 80 million acres--for use of the livestock industry. Grazing permits were issued within each district. And isolated tracts not within a grazing district were leasable, with preference given to adjacent or nearby landowners in the stockraising business.

Grazing Permit (Section 4 Permit) (August 28, 1937 [43 U.S.C. 1181(d)] - means a document authorizing use of the public lands within an established grazing district. Grazing permits specify all athorized use including livestock grazing, suspended use, and conservation use. Permits specify the total number of AUM's apportioned, the area authorized for grazing use, or both.

67

APPENDIX D

BIOLOGICAL EVALUATION FOR SAN FELIPE LAND EXCHANGE

Bureau of Land Management
Albuquerque Field Office

April 5, 2000

TABLE OF CONTENTS

INTRODUCTION 1

DESCRIPTION OF THE SELECTED ALTERNATIVE (LAND EXCHANGE) 1

SPECIES IDENTIFICATION/DETERMINATION 1

CUMULATIVE IMPACTS 1

TABLE 1 (THREATENED AND ENDANGERED, PROPOSED, AND CANDIDATE SPECIES) 2

SPECIES EVALUATIONS 3
- Black-Footed Ferret 3
- Southwestern Willow Flycatcher 5
- Bald Eagle 8
- Mexican Spotted Owl 9
- Whooping Crane 11
- Mountain Plover 12
- Rio Grande Silvery Minnow 14

REFERENCES 16

APPENDIX A - WILDLIFE HABITAT SURVEY 18

APPENDIX B - RESTRICTIVE COVENANTS 21

APPENDIX C - SPECIAL STATUS SPECIES EVALUATION 24

69

INTRODUCTION

This Biological Evaluation (Consultation #2-22-00-I-161) has been prepared to analyze the selected alternative as identified in the Environmental Impact Statement (EIS) for the San Felipe Land Exchange located in the Albuquerque Field Office (AFO) Bureau of Land Management (BLM) (refer to Map #1). The biological evaluation addresses the exchange of public lands (9,459 acres) out of federal ownership and evaluates all listed, proposed and candidate species potentially found within Sandoval and Santa Fe Counties identified by the U.S. Fish and Wildlife Service (FWS)(refer to Table 1).

Seven federally listed, proposed, and candidate species are known or have the potential to occur in Sandoval and Santa Fe Counties (USDI, FWS 2000). However, because of the land ownership patterns and the specific habitats used by these species, the animals may occur within the broad borders of the counties but not specifically on public lands within the land exchange area. The potential for these species' presence, their habitats within the area, and any potential impacts on them resulting from implementation of the selected alternative are examined in this Biological Evaluation.

DESCRIPTION OF THE SELECTED ALTERNATIVE (EXCHANGE PROGRAM)

The primary objective of this program is to exchange isolated and less manageable public lands (9,459 acres) with other land holders (San Felipe Indian Tribe) to help acquire private in-holding within wilderness areas and block-up areas of public land that would be more manageable.

SPECIES IDENTIFICATION/DETERMINATION

The AFO has prepared this Document on the threatened, endangered, proposed and candidate species shown in Table 1, as identified by the U.S. Fish and Wildlife Service (USDI, FWS 2000).

The BLM has determined, based on this Biological Evaluation, that the exchange of public lands will result in the following determination for all the listed, proposed, or candidate species: "No Affect" (refer to Table 1).

CUMULATIVE IMPACTS

Cumulative effects are those effects of future non-federal (State, local government, or private) activities on endangered and threatened species or critical habitat that are reasonably certain to occur in the foreseeable future. The following are those non-federal actions that may affect those species and/or their habitats. These actions include: recreation uses, private subdivisions, livestock grazing, agriculture, resource extraction, silviculture and road construction. Refer to the species evaluation section for an analysis of cumulative impacts for each species.

TABLE 1

THREATENED AND ENDANGERED, PROPOSED, AND CANDIDATE SPECIES

Species	Classification	Determination of Affect	County
Mammals			
black-footed ferret	Endangered	No Affect	(Both)
Birds			
Southwestern willow flycatcher	"	No Affect	(Both)
bald eagle	Threatened	No Affect	(Both)
Mexican spotted owl	"	No Affect	(Both)
whooping crane	Nonessential Experimental	No Affect	(Both)
mountain plover	Proposed Threatened	No Affect	(Both)
Fish			
Rio Grande silvery minnow	Endangered	No Affect	(Both)

SPECIES EVALUATIONS

Black-Footed Ferret (*Mustela nigripes*)

This species is associated with prairie dog towns in grassland plains, semi-arid grasslands and adjacent mountain basins. The black-footed ferret historically occurred over most of New Mexico (USDI, BLM 1984). The last confirmed sighting in New Mexico was in 1934 (USDI, BLM 1995). No black-footed ferrets are known to exist other than the captive and reintroduced populations in Wyoming, Montana, South Dakota, and Arizona. However remnant populations may still exist in portions of the former range (*ibid*).

The best information available indicates that the black-footed ferret is extirpated from the wild in New Mexico (NMDG&F 1996, 1998). However, in 1998, a captive breeding project was initiated at Vermejo Park Ranch near Raton, NM.

The most recent information from the FWS (USDI, FWS 1989, 2000) indicates that prairie dog towns of the following sizes are necessary to maintain a black-footed ferret population: (a) 80 acres for black-tailed prairie dogs, and (b) 200 acres for Gunnison's prairie dogs.

An evaluation for the presence of prairie dogs to support black-footed ferrets was conducted within the land exchange area (USDI, BLM 2000-Refer to Appendix A). No prairie dog colonies of size necessary to support black-footed ferrets were identified within the area.

It appears from the available literature that grazing (including intense use) does not have a negative impact on prairie dog colonies. In fact, some literature sources support grazing because it seems to increase the density of prairie dog colonies. In particular, black-tailed prairie dogs have been shown to prefer areas with short vegetation cover, which apparently allows them to view predators and maintain a complex social system (Fagerstone and Ramey 1996-1). Rates of prairie dog colony settlement and expansion have been shown to increase under intense livestock grazing and other human disturbance such as homesteading, fencing, cultivation, and the construction of water impoundments (*ibid*. 1996-2). All of these land management practices reduce the height and density of grasses, and provide a desirable environment for prairie dogs to expand and establish new colonies. Fagerstone and Ramey (1996-3) found that prairie dog burrow densities in the Conata Basin of South Dakota increased twice as fast on sites grazed by cattle as on ungrazed sites.

Prairie dog colonies modify the grasslands in a similar manner as grazing cattle do, by their feeding activities. The rodents depend on being able to see terrestrial predators from a distance (*ibid*. 1996-1) and modify vegetation by feeding on grasses and clipping unpalatable plants to ground level (*ibid*. 1996-4). In well-established prairie dog colonies, large areas of bare soil are common (*ibid*. 1996-5).

Prairie dogs were widespread on the Plains throughout the 1800s, being estimated to cover 283 million hectares (about 700 million acres) and to number over 5 billion (*ibid*. 1996-6). To control prairie dog numbers, rodenticides were developed; in the early 1900s millions of hectares were treated with grains containing strychnine and other poisons, significantly reducing prairie dog numbers and eliminating most large colonies. By 1919, after 20 years of control efforts, the area occupied by prairie dogs was reduced to an estimated 40.5 million hectares (100 million acres; *ibid*. 1996-7). In 1971 the estimated occupied areas in the United States was only 566,000 hectares (1.4 million acres; *ibid*. 1996-8). Before that year, these control efforts eliminated approximately 99.8 percent of the prairie dog population in the United States. From the available literature, it appears the decline in prairie dog colonies, and consequently the black-footed ferret throughout the west, was related to federal, state, and local poisoning programs. Also, land use practices reduced available habitat by converting vast areas of the Great Plains to agriculture and urban areas.

The prairie dog population within AFO lands appears to be stable; however, colony sizes fluctuate up and down on a regular basis, mainly due to plague that occurs throughout New Mexico. Plague appears to be the limiting factor in controlling the size of prairie dog colonies within the AFO.

Baseline Data

- Historically, large prairie dog towns occurred throughout New Mexico and probably in Sandoval and Santa Fe counties. Due to widespread poisoning programs and habitat alterations of prairie dog colonies, primarily for agricultural and grazing purposes, suitable habitat for the black-footed ferret was basically eliminated from the state.

- No black-footed ferrets are known to exist other than the captive and reintroduced populations in Wyoming, Montana, South Dakota, Arizona and New Mexico. The best information available indicates that the black-footed ferret is apparently extirpated from the wild in New Mexico.

Affect Determination

Based on the analysis that no habitat exists (e.g., large prairie dog colonies) necessary to support this species within the area, and that all of the existing habitat would be protected under restrictive covenants(Refer to Appendix B), the BLM has determined that implementation of the land exchange identified within the EIS would result in a "No Affect" situation for the black-footed ferret.

Rationale

- No black-footed ferrets are known to exist outside of the captive and reintroduced populations in Wyoming, Montana, South Dakota, Arizona and New Mexico. The best information available indicates that the black-footed ferret is apparently extirpated from the wild in New Mexico.
- No habitat (Large prairie dog colonies) necessary to support this species has been identified on BLM-administered lands within the affected area.
- The Bureau of Land Management (BLM) lands being conveyed are subject to a restricted covenants that restrict activities such as: extraction of minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface disturbing actions. These restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

No current or potential habitat (Large prairie dog colonies) exists within the area to support the Black-footed Ferret.

Because the proposed action (land exchange) has a "No Affect" for the Black-footed Ferret, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

The Southwestern willow flycatcher is found along riparian habitats (e.g., rivers, streams and wetlands) of the desert Southwest where dense groves of willows (e.g., *Salix*, *Baccharis* spp.), arroweed, buttonbrush, boxelder and alder are present, often with a scattered overstory of cottonwood (Tibbitts *et al.* 1994). In some locations, exotic plants including tamarisk and Russian olive are also used for nesting. The bird is associated with multi-layered vegetation in close proximity to slack water. The surrounding vegetation of the nesting areas generally ranges from 12 to 21 feet high (*ibid*). Southwestern willow flycatchers breed in habitat where surface water is present (Sferra *et al.* 1995).

Historically the Southwestern willow flycatcher nested along the major river systems in northern New Mexico. However, as the result of riparian degradation during the past century, very little habitat remains.

An evaluation for riparian/wetland habitats to support Southwestern willow flycatchers was conducted within the land exchange area (USDI, BLM 2000-Refer to Appendix A). No current or potential riparian/wetland areas needed to support Southwestern willow flycatchers were identified.

Baseline Data

- Historically the Southwestern willow flycatcher nested along the major river systems in northern New Mexico.
- No habitats (e.g., riparian/wetland areas) have been identified on BLM-administered lands that would support the Southwestern willow flycatcher within the land exchange area.

73

Affect Determination

Based on the analysis that no current or potential habitat (e.g., riparian/wetland areas) needed to support this species exists within the exchange area, and that all of the existing habitat would be protected under a restrictive covenants (Refer to Appendix B), the BLM has determined that implementation of the proposed action (land exchange) identified in the EIS would result in a "No Affect" situation for the Southwestern willow flycatcher.

Rationale

- No current or potential habitat (e.g., riparian/wetland areas) to support the Southwestern willow flycatcher have been identified on BLM-administered lands within the land exchange area.
- The BLM lands being conveyed are subject to a restrictive covenants that restrict activities such as: extraction of minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface disturbing actions. This restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

No current or potential habitat exists within the land exchange area to support the Southwestern willow flycatcher.

Because the proposed action (land exchange) has a "No Affect" for the Southwestern willow flycatcher, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

Ongoing Actions

In March, 1997, the BLM completed Section 7 consultation (#2-22-95-I-410) on the Rio Puerco Resource Management Plan for the Southwestern willow flycatcher. The FWS attached seven Conservation Recommendations (CR) to the non-jeopardy opinion. The implementation of the seven conservation recommendations are as follows:

- CR-1 Continue flycatcher surveys

The 1998 and 1999 flycatcher surveys were completed as part of a challenge cost sharing agreement with Hawks Aloft. All currently potential and short-term potential habitat areas were surveyed three times during the nesting season according to protocol. This will continue to be an ongoing annual effort for those currently potential and short-term potential habitat areas. Migrating flycatchers have been observed during several of the surveys, but no nesting activity has been identified.

- CR-2 No livestock grazing should occur within areas considered unoccupied, currently potential flycatcher habitat as well as any areas that become occupied by flycatchers from April 15 to August 15

Bluewater Creek ACEC is the only area that is considered unoccupied, currently potential flycatcher habitat within AFO lands. The area has no grazing year-long. No other areas have become occupied by the flycatchers.

- CR-3 No habitat-modifying or vegetative manipulation activities should occur within areas considered unoccupied, currently potential flycatcher habitat. In all other areas, removing vegetation/planting non-native species would require consultation

Bluewater Creek ACEC is the only area that is considered unoccupied, currently potential flycatcher habitat within AFO lands. No habitat or vegetative manipulation is occurring within the Bluewater Creek ACEC. In other flycatcher habitats, planting of native vegetation is occurring on a regular basis. Planting of native vegetation (willows, cottonwoods) is an ongoing effort to restore riparian habitat on lands managed by the AFO.

- CR-4 Summarize trend information so that uplands can be better assessed

In 1998 all of the lotic (running water) segments within the resource area were reevaluated for Properly Functioning Condition. Beginning in July, 1998, an environmental process (EA) was initiated to determine

74

conditions of all grazing allotments, including those with riparian habitat. This EA process will take several years due to the large number of allotments, but will help in the future to summarize upland information and the recovery of riparian communities.

- CR-5 Develop a management plan for the flycatcher in the interim until a recovery plan has been completed

The Albuquerque Field Office, Southwestern Willow Flycatcher Management Plan was completed and implemented in 1998.

- CR-6 Assess the impacts of winter grazing in riparian habitat

In 1997, a riparian enclosure was established within the Lost Valley riparian pasture. In 2000, a riparian enclosure will be established in the Azabache Riparian pasture, to evaluate winter grazing within the allotments.

- CR-7 Continue fencing riparian areas to exclude livestock grazing and track vegetative trends

In 1998, the BLM finished fencing the Coal Creek Allotment, and established a riparian pasture in the Azabache Allotment to protect these riparian areas. As part of a Habitat Management Plan/Environmental Impact Statement (HMP/EIS) for all riparian areas within the AFO, the BLM will be establishing protective measures for all riparian areas identified during the process. The HMP/EIS is anticipated to be completed in the summer of the year 2000.

Bald Eagle (*Haliaeetus leucocephalus*)

Bald eagles are generally associated with medium to large perennial streams, rivers and other water bodies that provide an adequate prey base and appropriate nesting/roosting habitat. Outside of the major river corridors (e.g., Rio Grande, Chama), the bald eagle has been observed to seasonally migrate.

An evaluation for riparian/wetland habitats to support bald eagles was conducted within the land exchange area (USDI, BLM 2000-Refer to Appendix A). No foraging habitat (e.g., rivers/streams/ waterbodies) or roosting habitat (e.g., large trees) needed to support bald eagles were identified.

The breeding population of bald eagles has historically been low, although New Mexico does provide habitats for wintering and migration. Food availability is a major factor influencing bald eagle distribution. Fish is generally considered the preferred prey base for bald eagles. However, waterfowl (particularly dead or crippled individuals), dead livestock, rabbits and small mammals can be used as a prey base for a wintering population.

Bald eagles have been observed migrating seasonally through the general area, but no nesting or roosting is known due to the lack of appropriate habitat.

The bald eagle population is in an upward trend throughout the United States. In July 1994, the FWS proposed to reclassify the bald eagle from endangered to threatened in the lower 48 states, including the southwestern region and Mexico. On August 11, 1995, this reclassification took place.

Baseline Data

- No habitats (e.g., rivers/streams/waterbodies) have been identified on BLM-administered lands that would support bald eagles within the land exchange area.
- Bald eagles are known to seasonally migrate through Sandoval and Santa Fe Counties, but due to the lack of appropriate habitat on BLM-administered lands within the land exchange area, no use of these lands is anticipated.

Affect Determination

Based on the analysis that no habitats exists (e.g., streams/rivers) to support this species within the land exchange area, and that all of the existing habitat would be protected under restrictive covenants (Refer to Appendix B), the BLM has determined that implementation of the proposed action (land exchange) identified in the EIS would result in a "No Affect" situation for the bald eagle.

Rationale

- No habitats (e.g., streams/rivers/waterbodies) have been identified on BLM-administered lands that would support the bald eagle within the land exchange area.
- Bald eagles are known to migrate seasonally through Sandoval and Santa Fe Counties, however, with no habitat to support nesting/roosting (e.g., large trees) or foraging (e.g., streams/rivers/waterbodies), they are not expected to use any of the area.
- The BLM lands being conveyed are subject to restrictive covenants that restrict activities such as: extraction of minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface disturbing actions. These restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

No current or potential habitat exists within the land exchange area to support the bald eagle.

Because the proposed action (land exchange) has a "No Affect" for the bald eagle, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

Mexican Spotted Owl (*Strix occidentalis lucida*)

The Mexican spotted owl occupies mountainous areas, with its preferred habitat consisting of dense, multi-storied forests with moderately closed to closed canopies. In addition, these owls have been found in canyon systems with little or no tree cover (USDI, FWS 1993). These canyon systems appear to provide the same or similar microclimate as the dense multi-storied forests.

Historically northern New Mexico contained forest stands that no longer exist today. Beginning in the 1800s homesteaders, owners of land grants, and private logging companies removed most of large commercial timber from the area. These past forestry practices have resulted in a lack of any dense, old-growth forests remaining.

An evaluation for forest/canyon habitats to support Mexican spotted owls was conducted within the exchange area (USDI, BLM 2000-Refer to Appendix A). No habitat was identified that would support Mexican spotted owls. The woodland habitat is comprised entirely of scattered piñon-juniper stands, with no canyon habitat occurring within the area. The Mexican Spotted Owl Recovery Plan (USDI, FWS 1995) does not contain specific guidelines for piñon-juniper habitats, which are considered as "Other Forest and Woodland Types" in the plan.

No critical habitat has been designated by the FWS on any BLM lands within any of the exchange area.

Baseline Data

- Historically northern New Mexico contained forest stands that no longer exist today. From the 1800s, homesteaders, owners of land grants, and private logging companies removed most of large commercial timber within the area. As the result of these historic forest practices, no habitats that meet the criteria to support this species have been identified on BLM-administered lands within the Albuquerque Field Office.
- No habitats (e.g., forest/canyon) exists on BLM-administered lands necessary to support this species within the exchange area. All of the woodland habitat is comprised of piñon-juniper stands.
- No specific guidelines have been established for piñon-juniper habitats, which are considered as "Other Forest and Woodland Types" within the U.S. Fish and Wildlife Service's Mexican spotted owl recovery plan.

Affect Determination

Based on the analysis that no habitats exists (e.g., forest/canyon) to support this species within the exchange area, and that all of the existing habitat would be protected under restrictive covenants (Refer to Appendix B), the BLM has determined that implementation of the San Felipe exchange identified in the EIS would result in a "No Affect" situation for the Mexican spotted owl.

Rationale

76

- No habitat (e.g., forest/canyon) exists on BLM-administered lands to support this species within the exchange area. All of the woodland habitat is comprised of piñon-juniper stands.

- The BLM lands being conveyed are subject to restrictive covenants that restrict activities such as: extraction of minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface disturbing actions. These restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

No current or potential habitat exists within the exchange area to support the Mexican spotted owl.

Because the proposed action (land exchange) has a "No Affect" for the Mexican spotted owl, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

Whooping Crane (Grus americana)

The whooping crane breeds mainly at Wood Buffalo National Park, Canada and winters mainly along the Gulf Coast of Texas at the Aransas National Wildlife Refuge. A few whooping cranes raised by foster parents (sandhill cranes) at Grays Lake, Idaho still migrate with sandhill cranes to the Rio Grande Valley, New Mexico. These birds (2 to 4 in number) winter mainly in the Bosque del Apache National Wildlife Refuge, located approximately 20 miles south of Socorro, New Mexico. This population is designated as a non-essential experimental population.

Whooping cranes select an open expanse of shallow water in rivers, lakes, reservoirs and native wetlands for nightly roosting. Feeding sites include the same wetland types as those used during roosting and agricultural fields. The whooping crane typically roosts on sand bars within the Rio Grande flood-plain (NMDG&F 1988, 1995). Whooping cranes seasonally move up and down the Rio Grande corridor during their spring and fall migrations; however, they would be considered rare visitors to the area.

An evaluation for riparian/wetland habitats to support whooping cranes was conducted within the land exchange area (USDI, BLM 2000-Refer to Appendix A). No such habitats were identified. No suitable riparian/agricultural habitat occurs on BLM-administered lands in the AFO.

Baseline Data

- Historically whooping cranes did not use the Rio Grande Valley for migration; only as the result of a fostering program some birds have migrated with the sandhill crane population, which does use the Rio Grande Valley extensively. This population is designated as a non-essential experimental population.

- Within New Mexico, the whooping crane is associated with agricultural fields and valley pastures, particularly where there is waste grain or sprouting crops.

Affect Determination

Based on the analysis that no habitat exists (e.g., rivers/streams) to support this species within the land exchange area, and that all of the existing habitat would be protected under restrictive covenants (Refer to Appendix B), the BLM has determined that implementation of the proposed action (land exchange) identified within the EIS would result in a "No Affect" situation for the whooping crane.

Rationale

- Whooping cranes would be considered rare migrants to the land exchange area. This population is designated as a non-essential experimental population.

- No suitable or potential riparian/agricultural habitat occurs on lands administered by the BLM Albuquerque Field Office within the land exchange area.

- The BLM lands being conveyed are subject to restrictive covenants that restrict activities such as: extraction of minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface

77

disturbing actions. These restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

No current or potential habitat exists within the land exchange area to support whooping cranes.

Because the proposed action (land exchange) has a "No Affect" for whooping cranes, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

Mountain Plover (*Charadrius montanus*)

The mountain plover prefers flat, short-grass prairie and tends to avoid taller grasses and hillsides (USDI, BLM 1995). Suitable habitat occurs in areas often grazed by livestock (*ibid*). The bird prefers habitat comprised of large areas of bare ground and short grass (less than 4-inch-tall stubble). Prairie dog towns and turf farms are likely areas of use. Outside the breeding season, this species occurs in flocks of individuals up to several hundred feeding in alkaline flats, plowed ground, sprouting grain fields and grazed pastures (Terres 1982). Short vegetation, bare ground, and a flat topography are now recognized as habitat-defining characteristics (USDI, FWS 1999). In addition to using prairie dog towns, mountain plovers show a strong affiliation with sites that are heavily grazed by domestic livestock (e.g., near stock watering tanks)(*ibid*).

The mountain plover has been identified in numerous locations throughout northern New Mexico during surveys by the New Mexico Department of Game and Fish in 1995 (Williams 1995). The bird is likely to occur throughout the AFO in areas of flat short-grass prairies. No critical habitat has been established.

An evaluation for habitat to support Mountain Plovers was conducted within the exchange area (USDI, BLM 2000-Refer to Appendix A). The area is comprised of rolling hills with scattered piñon-juniper woodlands and would not be considered suitable habitat for the Mountain Plover.

Baseline Data

- Habitat destruction, primarily resulting from the conversion of prairie ecosystems to agricultural croplands, has been the primary cause of long-term population declines. In the late 1800s this species was also subjected to market hunting.
- The current nesting range is restricted to small populations in parts of California, Montana, Wyoming, Colorado, Oklahoma, and New Mexico.
- Mountain plovers are successful in using areas grazed by livestock, in fact they preferred areas where grazing livestock/wildlife maintain the ground cover at a short stubble height.

Affect Determination

Based on the analysis that no habitat exists to support this species within the land exchange area and that the existing habitat will be protected by restrictive covenants (Refer to Appendix B), the BLM has determined that implementation of the proposed action (land exchange) identified within the EIS would result in a "No Affect" situation for the mountain plover.

Rationale

- Flat short-grass prairies (preferred habitats) does not occur within the area. The habitat within the area consists of rolling hills with scattered piñon-juniper woodlands, and would not be considered suitable habitat for the mountain plover.
- Mountain plover habitat is not limited on other AFO lands, and is found throughout the area on BLM-administered and adjacent state and private lands. A mosaic of vegetation and bare ground occurs throughout the AFO lands.
- The BLM lands being conveyed are subject to restrictive covenants that restrict activities such as: extraction of

minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface disturbing actions. These restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

Very marginal habitat exists within the land exchange area to support the mountain plover.

Because the proposed action (land exchange) has a "No Affect" for mountain plover, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

Rio Grande Silvery Minnow *(Hybognathus amarus)*

The Rio Grande silvery minnow is found in the middle Rio Grande, from Cochiti Dam to the headwaters of Elephant Butte Reservoir. This area has been designated as proposed critical habitat. However, surveys in recent years have identified that the majority of the population now occurs only within the immediate headwaters of Elephant Butte Reservoir.

This species is localized within an area in which the BLM does not administer lands within the habitat of the Rio Grande silvery minnow nor manage any of the waters of the Rio Grande within this area.

An evaluation for riparian/wetland habitats to support Rio Grand silvery minnows was conducted within the land exchange area (USDI, BLM 2000-Refer to Appendix A). No such habitats were identified.

The AFO is aggressively protecting and enhancing (e.g., fencing, planting) riparian habitats along the tributaries to the Rio Grande that occur on BLM-administered lands (e.g., Rio Puerco, Rio Salado). The agency's goals to restore these habitats to properly functioning condition, not only to benefit the Rio Grande silvery minnow but for many other wildlife species and resource values (e.g., limiting soil erosion).

Baseline Data

- The Rio Grande silvery minnow is found in the middle Rio Grande, from Cochiti Dam to the headwaters of Elephant Butte Reservoir. However, surveys in recent years have identified that the majority of the population now occurs only within the immediate headwaters of Elephant Butte Reservoir.
- Water availability appears to be the main limiting factor jeopardizing this species. The Rio Grande has dried up numerous times, due mainly to irrigation operations, over last several decades.
- The BLM does not administer lands within the habitat of the Rio Grande silvery minnow nor manage any of the waters of the Rio Grande within this area.

Affect Determination

Based on the analysis that no habitat exists (e.g., rivers/streams) to support this species within the land exchange area, and that all of the existing habitat would be protected under restrictive covenants (Refer to Appendix B), the BLM has determined that implementation of the proposed action (land exchange) identified within the EIS would result in a "No Affect" situation or the Rio Grande silvery minnow.

Rationale

- Known distribution of the Rio Grande silvery minnow in New Mexico is limited (Cochiti Dam to Elephant Butte Reservoir). However, surveys in recent years have identified that the majority of the population now occurs only within the immediate headwaters of Elephant Butte Reservoir. The AFO does not administer any public lands or authorize any activities within or adjacent to known habitats of this species.
- No suitable or potential riparian/wetland habitat occurs on lands administered by the BLM Albuquerque Field Office within the land exchange area.

79

- The BLM lands being conveyed are subject to restrictive covenants that restrict activities such as: extraction of minerals, oil and gas development, construction of homes/subdivision, and other surface and sub-surface disturbing actions. These restrictive covenants would protect the existing wildlife habitats on all 9,459 acres (refer to Appendix B for a complete description of the restrictions/reservations).

Cumulative Impacts

No current or potential habitat exists within the land exchange area to support the Rio Grande silvery minnow.

Because the proposed action (land exchange) has a "No Affect" for the Rio Grande silvery minnow, there would be no incremental increase in the existing or foreseeable future cumulative impacts within the AFO for this species. The cumulative impacts presently existing (e.g., federal, private, state activities) for this species would not change due to this action.

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Appendix A

Field Trip Survey-Wildlife Habitat
San Felipe and Santo Domingo Land Exchanges

James B. Silva (Wildlife/T&E Specialist) and McKinley Ben Miller (Riparian/Forestry Specialist) conducted a field trip to the two land exchange areas on March 1, 2000 to conduct a survey of existing wildlife habitats within the areas. Surveying for habitat associated with the following species was of particularly importance during the field trip due to their potential presence within Sandoval and Santa Fe Counties (FWS 2000)

Species	Status
#1 - Black-Footed Ferret	Endangered
#2 - Mexican Spotted Owl	Threatened
#3 - Southwestern Willow Flycatcher	Endangered
#4 - Bald Eagle	Threatened
#5 - Whooping Crane	Nonessential experimental population
#6 - Mountain Plover	Proposed Threatened
#7 - Rio Grande Silvery Minnow	Endangered

The following were those specific habitat components that were surveyed for based on habitat preference of the potential Special Status Species occurring within the area.

- Forest (ponderosa pine/fir/mixed conifer) habitats - #2
- Canyon habitats - #2
- Flat open grassland/prairie habitats - #1 and 6
- Riparian/wetland/Aquatic habitats - #3, 4, 5 and 7
- Prairie dog colonies - #1 and 6

Species/Habitat Evaluations

Forest-Canyon Habitats:

Survey Data: No ponderosa pine, fir or mixed conifer habitat was identified within the areas. The areas consists of rolling hills with an evenly scattered over story of piñon-juniper (See photos #1 and #2). The low lying areas in between the rolling hills consisted of ephemeral arroyos that were a few feet to 100 feet deep. There are three large arroyos that bisect the San Felipe Exchange area (Arroyo del Tonque, Arroyo Coyote and Arroyo de la Vega de los Tanos) and one large arroyo the bisects the Santo Domingo Exchange area (Arroyo Largo). The Arroyo del Tonque provides some of the best canyon habitat within both of the areas. The canyon is approximately 50-75 foot deep and from 25 to 100 feet wide with some vertical but mostly broken rock walls. However, the canyon contained no micro-climate habitat that is associated with Mexican Spotted Owl use of canyons.

Flat open grassland/prairie habitats:

Survey Data: No flat grassland/prairie habitat was identified within the areas. The areas consists of rolling hills with an evenly scattered over story of piñon-juniper (See photos #1 and #2). The low lying areas in between the rolling hills consisted of ephemeral arroyos that were a few feet to 100 feet deep. There were some small (<1acre) tracts that occurred around some of the windmills that were generally flat and open with no tree cover. However, these areas were so small and widely scattered that no use of these small tracts would be expected.

Riparian-Wetland-Aquatic Habitats:

Survey Data: No riparian/wetland/Aquatic habitat of the size necessary to support Southwestern willow flycatchers, bald eagle, whooping crane or Rio Grande silvery minnow were identified within the areas. Within the two land exchange areas, artificial waters (wind mills) are present and several have small overflow ponds (20X20 feet) in size. The remainder of the areas consists of ephemeral arroyos that are a few feet to 100 feet deep. There are three large arroyos that bisect the San Felipe Exchange area (Arroyo del Tonque, Arroyo Coyote and Arroyo de la Vega de los Tanos) and one large arroyo the bisects the Santo Domingo Exchange area (Arroyo Largo). All of these arroyos as well as the smaller ones would have running water only during spring snow melt or during intense summer rain storms. The Arroyo del Tonque is approximately 50-75 foot deep and from 25 to 100 feet wide with some vertical but mostly broken rock walls. This arroyo contained some surface water (at the time of the survey) and one lone cottonwood tree (20-30 years old) at one location. However, no other riparian vegetation was observed within this area of the tree or along the remainder of the channel. At the head of the Arroyo del Tonque a windmill with an overflow pond does exists. It is speculated that the water in the arroyo may be seeping from the pond or downhole in the windmill and that due to the impervious rock layers along the canyon floor, that the water is brought to the surface at this one location.

Prairie dog colonies:

Survey Data: No sign of prairie dog colonies were identified within the two areas. No flat grassland/prairie habitat was identified within the areas that would support prairie dog colonies. The area consists of rolling hills with an evenly scattered over story of piñon-juniper (See pictures #1 and #2). The low lying areas in between the rolling hills consisted of ephemeral arroyos that were a few feet to 100 feet deep. There were some small (<1acre) tracts that occurred around some of the windmills that were generally flat and open with no tree cover. However, none of these areas showed any signs of prairie dog use. The soils in the area consists of gravelly/rocky substrate with very shallow soils, which are not conducive for digging rodents, refer the foreground in photos #1 and #2, and photo #3.

Appendix B

DECLARATION OF RESTRICTIVE COVENANTS
FOR THE SAN FELIPE EXCHANGE
SANDOVAL AND SANTA FE COUNTIES, NEW MEXICO

WHEREAS, the United States is the owner of all of the following described real property located mainly in Sandoval County and partly in Santa Fe County, New Mexico, hereinafter known as the San Felipe Exchange Lands ("Exchange Lands"). A legal description of the Exchange Lands is attached as Ex. 1; and,

WHEREAS, the San Felipe Exchange Lands are the subject of a land exchange between the United States and the Pueblo of San Felipe ("the Pueblo") authorized by Section 206 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1717, and the Record of Decision issued by the U.S. Department of Interior, Bureau of Land Management dated __________ 2000; and,

WHEREAS, the United States shall remain in possession of lands known as the Ball Ranch Area of Critical Environmental Concern ("the ACEC", a legal description of which is attached as Ex. 2) that are adjacent to the Exchange Lands; and,

WHEREAS, the Pueblo intends to preserve the Exchange Lands in perpetuity and manage the lands to protect their outstanding scenic, natural resource, cultural and historic values; and,

WHEREAS, United States, for the benefit of the people of the United States and the Pueblo of San Felipe, desires to place the following restrictive covenants upon the Exchange Lands limiting the use and occupancy thereof upon the conveyance of the lands to the Pueblo:

ARTICLE I
Hazardous Materials and Dumping

The storage, dumping or other disposal of toxic or hazardous materials or of non-compostable refuse is prohibited.

ARTICLE II
Mining and Mineral Extraction; Gathering of Native Plants

Any exploration or drilling for, or excavation, mining, or extraction of, any metal, hydrocarbon, oil or gas, mineral, soil, sand, gravel or rock on or below the surface of the Exchange Lands is prohibited. Nothing in the foregoing, however, shall preclude the Pueblo and its members from taking clay, soils, minerals or native plants from any of the Exchange Lands for traditional uses.

ARTICLE III
Subdivision and Development of Land

The subdivision of the Exchange Lands for residential or commercial development is prohibited.

With the exception of stock tanks, wells, windmills, utility
lines, hay shelters, line camps or administrative sites as may be needed to facilitate the Pueblo's livestock grazing operations; the construction or placement of any signs, billboards and other advertising medium, utility towers, and communications towers, is prohibited.

ARTICLE IV
Water Rights

The conveyance of surface and ground water rights by any party subject to the terms of these covenants from on or below the Exchange Lands is prohibited.

ARTICLE V
General Provisions

1. The U.S. Bureau of Land Management shall hold these Restrictive Covenants for the United States. The U.S. Bureau of Indian Affairs shall enforce these covenants at the direction of the Secretary of Interior or his designee on behalf of the United States.

2. Nothing herein shall be construed to grant to any member of the public any access or right if access to any portion. of the lands conveyed herein, or as authorizing the United States to grant any such right of access to any third person without the express prior written consent of the Pueblo.

3. These Restrictive Covenants shall be construed under applicable law in the jurisdiction to effectuate their purposes of conserving important wildlife habitat, and open space; to promote the sustainable use of minerals, water, native plants, wildlife, and other natural resources for the traditional use of San Felipe Pueblo tribal members; and, to protect the Exchange Lands in their present, substantially undisturbed natural state, with significant topological, historic, and cultural resource values preserved in perpetuity, but without interfering with any uses of the Exchange Lands by the Pueblo for any Purposes consistent with the preservation of the lands' conservation values.

ARTICLE VI
Perpetual Nature and Enforcement of the Covenants

1. The provisions contained in the Restrictive Covenants shall run with and bind the Exchange Lands in perpetuity as a burden on the land and shall benefit, and be enforceable by, the United States by and through the Department of Interior, or by its successors and assigns. The Pueblo and its successors, assigns and all others acquiring an interest in the Exchange Lands shall agree and covenant to comply with the Restrictive Covenants as stated herein.

2. The United States may enforce these Restrictive Covenants against the Pueblo pursuant to its authority under its trust relationship with the Pueblo. The Pueblo's

successors and assigns may be subject to legal actions by the United States or any other person holding an interest seeking relief under law or equity for violations of these Restrictive Covenants. The United States reserves the right to enter the exchange lands upon ten (10) days written notice to the San Felipe Pueblo Governor's Office, P.O. Box A, San Felipe Pueblo, New Mexico 87001 and with the written consent of the Pueblo or its successors or assigns to monitor compliance with these Restrictive Covenants. The representative of the United States shall be accompanied by one or more duly authorized representatives from the Pueblo. The documentation complied by the U. S. Bureau of Land Management for preparation of the Final Environmental Impact Statement for the San Felipe Exchange shall serve as the baseline documentation of the condition. of the Exchange Lands for purposes of determining compliance with these covenants.

3. These Restrictive Covenants may be amended by agreement of the United States and the Pueblo or their successors and assigns, so long as any amendments made shall not impair the conservation values that the covenants are intended to protect.

4. Any failure by the United States, or by any other party burdened or benefitted by these Restrictive Covenants, to enforce any restriction, condition, covenant, or agreement herein contained shall not be deemed a waiver of the right to do so thereafter as to the same breach or as to one occurring prior to or subsequent thereto.

5. The invalidation of any the terms of the Restrictive Covenants shall in no way affect the remaining provisions, which shall remain in full force and effect.

IN WITNESS WHEREOF, the United States and the Pueblo have set their hands on the_____day of___________,2000.

For the United States:

___________________________________Bureau of Land Management

___________________________________Bureau of Indian Affairs

For the Pueblo of San Felipe:

___________________________________Governor

Appendix C
Biological Evaluation
Other Special Status Species (Sandoval County)

Forty BLM sensitive and State of New Mexico Threatened and Endangered species are known or have the potential to occur within Sandoval County (refer to the following list). However, because of the land ownership patterns and the specific habitats used by these species, they may occur with the broad borders of Sandoval County but may not occur on BLM-administered lands within the San Felipe Land Exchange area.

Special Status Species (USDI, FWS 2000, NMDG&F 1998 Sivinski and Lightfoot 1995)	Listing
Big free-tailed bat (*Nyctinomops macrotis*)	BS
Goat Peak pika (*Ochotona princeps nigrescens*)	BS
New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)	BS/ST
American martin (Martes americana origenes)	ST
Fringed Myotis (*Myotis thysanodes*)	BS
Long-eared myotis (*Myotis evotis*)	BS
Long-legged myotis (*Myotis volans*)	BS
Occult little brown bat (*Myotis lucifugus occultus*)	BS
Small-footed myotis (*Myotis ciliolabrum*)	BS
Spotted bat (*Euderma maculatum*)	BS/ST
Yuma myotis (*Myotis yumanensis*)	BS
Pale Townsend's (*Plecotus townsendii pallescens*)	BS
Ferruginous hawk (*Buteo regalis*)	BS
Loggerhead shrike (*Lanius ludovicianus*)	BS
Northern goshawk (*Accipiter gentilis*)	BS
Western burrowing owl (*Athene cunicularia hypugea*)	BS
Bald eagle (*Haliaeetus leucocephalus*)	FT/ST
American peregrine falcon (*Falco peregrinus anatum*)	BS/ST
Arctic peregrine falcon (*Falco peregrinus tundrius)*	BS
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE
Gray Vireo (*Vireo vicinior*)	ST
White-faced ibis (*Plegadis chihi*)	BS
Whooping crane (Grus americana)	XN/SE
Common Black-hawk (*Buteo gallus anthracinus*)	ST
Broad-billed hummingbird (*Cynanthus latirostris magicus*)	ST
Baird's sparrow (*Ammodramus bairdii*)	BS/ST
Yellow-billed cuckoo (*Coccyzus americanus*)	BS
Flathead chub (*Platygobio gracilis*)	BS
Rio Grande silvery minnow (Hybognathus amarus)	FE/SE
Rio Grande sucker (*Catostomus plebeius*)	BS
Jemez Mountain salamander (*Plethodon neomexicanus*)	BS/ST
New Mexico silverspot butterfly (*Speveria nokomis nitocris*)	BS
San Ysidro tiger beetle (*Cicindela willistoni funaroi*)	BS
William Lar's tiger beetle (*Cicindela fulgida williamlarsi*)	BS
Wrinkled marshsnail (*Stagnicola caperatus*)	SE
Gypsum phacelia (*Phacelia sp.*)	BS
Gypsum townsendia (*Townsendia gypsophila*)	BS
Knight's milk-vetch (*Astragalus knightii*)	BS
Parish's alkali grass (*Puccinellia parishii*)	BS
Wood lily (*Lilium philadelphicun*)	SE

FE = Federal Endangered, FT = Federal Threatened, XN = Nonessential experimental, BS = BLM sensitive (FWS-Species of Concern), ST = State Threatened, SE = State Endangered.

The Southwestern Willow Flycatcher, Bald Eagle, Whooping crane, and Rio Grande silvery minnow which are state listed species are also Federally listed species and have already been evaluated (refer to Biological Evaluation).

Background:

Healthy Rangeland: By implementing the restrictive covenants, it is anticipated that healthy rangelands would be maintained within the land exchange area.

Riparian Habitat Management: Only small isolated riparian habitats (e.g., around stock tanks) were located within the land exchange area.

Habitat Requirements: Many of these species require very specific habitats or a combination of habitats (e.g., riparian, aquatic, old growth forest, etc.) which provides the appropriate food, water and cover for survival. If the habitats necessary for the survival of particular species are not present within an area then it is assumed that the species associated with those habitats would not be present within the area. Example: A location within Sandoval County has no aquatic habitat identified within the area, consequently the Rio Grande Silvery Minnow, which occurs in Sandoval County and requires aquatic habitat to survive, would not be present and a "No Affect" determination would be appropriate.

The land exchange area was evaluated for the following specific habitat requirements to determine if certain special status species would be present within an allotment. However, many of these specific habitats were not found on BLM administered lands within the grazing allotments surveyed.

- Prairie dog colonies
- Riparian/wetland/Aquatic habitats
- Cliff habitat
- Forest (piñon/juniper, ponderosa pine) habitats
- Canyon habitat

Known Distribution: Many species have only been found in very localized situations within New Mexico (e.g., Jemez Mountain salamander-known only from high elevation in the Jemez Mountains) and would not be found on in locations outside of their specific known areas.

Accidental Migrants: Several of these species are rare or accidental migrants to northern New Mexico (e.g., White-faced ibis, common black hawk, Arctic peregrine falcon etc.). These species are only rarely seen within northern New Mexico (a few times a year) consequently it is very unlikely that these species would ever be found within the land exchange area.

Special Status Species Evaluation:

Healthy Rangeland: By maintaining a healthy rangeland condition, managing livestock grazing activities so as not to contribute to any vegetation degradation, and protecting riparian areas, a "May Affect-Not Likely to Adversely Affect" determination is appropriate for the following species.

Big free-tailed bat *(Nyctinomops macrotis)*	BS
New Mexico meadow jumping mouse *(Zapus hudsonius luteus)*	BS/ST
Fringed Myotis (*Myotis thysanodes*)	BS
Long-eared myotis (*Myotis evotis*)	BS
Long-legged myotis (*Myotis volans*)	BS
Occult little brown bat (*Myotis lucifugus occultus*)	BS
Small-footed myotis (*Myotis ciliolabrum*)	BS
Spotted bat (*Euderma maculatum*)	BS/ST
Yuma myotis (*Myotis yumanensis*)	BS
Pale Townsend's (*Plecotus townsendii pallescens*)	BS
American peregrine falcon (*Falco peregrinus anatum*)	BS/ST
Arctic peregrine falcon (Falco peregrinus tundrius)	BS
Ferruginous hawk (*Buteo regalis*)	BS
Loggerhead shrike (*Lanius ludovicianus*)	BS
Western burrowing owl (*Athene cunicularia hypugea*)	BS
Gray Vireo (*Vireo vicinior*)	ST
Common Black-hawk (*Buteo gallus anthracinus*)	ST
Broad-billed hummingbird (*Cynanthus latirostris magicus*)	ST
Baird's sparrow (*Ammodramus bairdii*)	BS/ST
New Mexico silverspot butterfly (*Speveria nokomis nitocris*)	BS
San Ysidro tiger beetle (*Cicindela willistoni funaroi*)	BS

William Lar's tiger beetle (*Cicindela fulgida williamlarsi*)	BS
Gypsum phacelia (*Phacelia sp.*)	BS
Gypsum townsendia (*Townsendia gypsophila*)	BS
Knight's milk-vetch (*Astragalus knightii*)	BS
Parish's alkali grass (*Puccinellia parishii*)	BS
Wood lily (*Lilium philadelphicun*)	SE

Riparian: Only small isolated riparian/aquatic habitats were identified within the area (e.g., around stock tanks) none of the size necessary to support any of the following species. Consequently a "No Affect" determination is appropriate for the following species.

Yellow-billed cuckoo (*Coccyzus americanus*)	BS
White-faced ibis (*Plegadis chihi*)	BS
Flathead chub (*Platygobio gracilis*)	BS
Rio Grande sucker (*Catostomus plebeius*)	BS
Rio Grande silvery minnow (Hybognathus amarus)	FE/SE
Wrinkled marshsnail (*Stagnicola caperatus*)	SE

Habitat Requirements: All of the following species require very specific habitats or a combination of habitats (e.g., old growth forest, large cottonwood gallery forest, etc.) that are lacking within the land exchange area. Consequently a "No Affect" determination is appropriate for the following species.

American martin (Martes americana origenes)	ST
Northern goshawk (*Accipiter gentilis*)	BS
Common Black-hawk (*Buteo gallus anthracinus*)	ST
Wrinkled marshsnail (*Stagnicola caperatus*)	SE
Wood lily (*Lilium philadelphicun*)	SE

Known Distribution: The following species have only been found in very localized situations within New Mexico and would be very unlikely to be found within the land exchange area which is outside of their specific known habitat. Consequently a "No Affect" determination is appropriate for the following species.

Goat Peak pika (*Ochotona princeps nigrescens*)	BS
Jemez Mountain salamander (*Plethodon neomexicanus*)	BS/ST

Accidental Migrants: These species are rare or accidental migrants to northern New Mexico. Because these species are only rarely seen within northern New Mexico (a few times a year) it is very unlikely that these species would even use the land exchange area. Consequently a "No Affect" determination is appropriate for the following species.

White-faced ibis (*Plegadis chihi*)	BS
Common Black-hawk (*Buteo gallus anthracinus*)	ST
Arctic peregrine falcon (Falco peregrinus tundrius)	BS

Based on Environmental Assessment for land exchange and taking into account healthy rangelands, riparian habitat management, known distribution, rare/accidental migrants, and specific habitat requirements, the BLM has determined that implementation of the proposed action for the land exchange identified within the Environmental Impact Statement, would create a "No Affect" or a "May Affect-Not Likely to Adversely Affect" situation for all of these Special Status Species.

APPENDIX E

HYDROGEOLOGIC SETTING OF PROPOSED FEDERAL LAND EXCHANGE AREA

HYDROGEOLOGIC SETTING OF PROPOSED FEDERAL LAND EXCHANGE AREA IN THE EASTERN HAGAN BASIN, SANDOVAL AND SANTA FE COUNTIES, NEW MEXICO

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8/9/99

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For the Bureau of Land Management, Albuquerque Field Office

This report provides a brief overview of the hydrogeologic conditions and aquifer potential of the eastern Hagan basin (Hagan embayment of Kelly, 1977) near the Sandoval-Santa Fe County line. The Hagan embayment is a southeastern extension of the Santo Domingo Basin of the Rio Grande rift structural province (Hawley, 1978).

The area described in this report is located in parts of Townships 13 and 14 North and Ranges 6 and 7 East. It extends southward from the Pueblo of Santo Domingo Reservation to near the Hagan and Puertocito townsites. The westernmost boundary is at the ruins of Tonque Pueblo (adjacent to the Pueblo of San Felipe); and the eastern border is along the western edge of Santa Fe County. The attached list of references includes most of the detailed information on the geology and water resources of the area described.

The Hagan basin is an east-tilted block of the earth's crust (or half graben) between the northern Sandia Mountains and Cuchillo de San Francisco on the west and faults (Rosario-La Bajada Zone) bounding the Cerrillos Uplift and Mesita de Juana Lopez on the east. The Hagan embayment is that part of the Hagan basin which is located between Espinaso Ridge and the La Bajada-Rosario fault zone. This triangular-shaped area opens northward into the eastern Santo Domingo Basin north of Interstate 25. The general hydrogeologic map and diagrammatic section AA' attached illustrate the basic geologic structure and topography of the area.

The initial stage of Hagan basin formation was a product of subsidence of a large northeast-trending block of the earth's crust during the early Cenozoic Laramide interval of mountain building in the Southern Rocky Mountain region. This deformation was associated with convergence and lateral movement of the tectonic plates that formed the western North American Continent at the time (Cather, 1992,1999). Older (Mesozoic and Paleozoic) sedimentary rocks of both marine and continental origin were deeply down-warped and down-faulted as the early Hagan basin subsided. The sandstones, mudstones and conglomerates of the Galisteo Formation that filled this basin are derived from surrounding highlands that now are preserved in only a few places notably in parts of the southern Sangre de Cristo, Nacimiento, and Manzano ranges.

The next major geologic unit preserved in the eastern Hagan basin is the volcaniclastic Espinaso Formation of Oligocene age. The present Ortiz Mountains and nearby igneous-intrusive highlands extending north from South Mountain to the Cerrillos Hills are the erosional remnants of the large volcanic centers that were the source areas of the Espinaso Formation sediments and associated volcanic flow units. The volcaniclastic sediments that make up most of the Formation have a dense mudstone matrix. Smaller bodies of intrusive igneous rocks (dikes, sills, and plugs) are also present. The type area for the Formation is at Espinaso Ridge, where the unit is transitional downward into the Galisteo Formation on the western and southern parts of the ridge.

The sandstones and conglomerates of the Galisteo Formation have some potential for domestic and stockwater production from very localized groundwater sources. However, the Espinaso Formation has very limited potential, if any, for groundwater production, and it primarily serves as an aquiclude or aquitard.

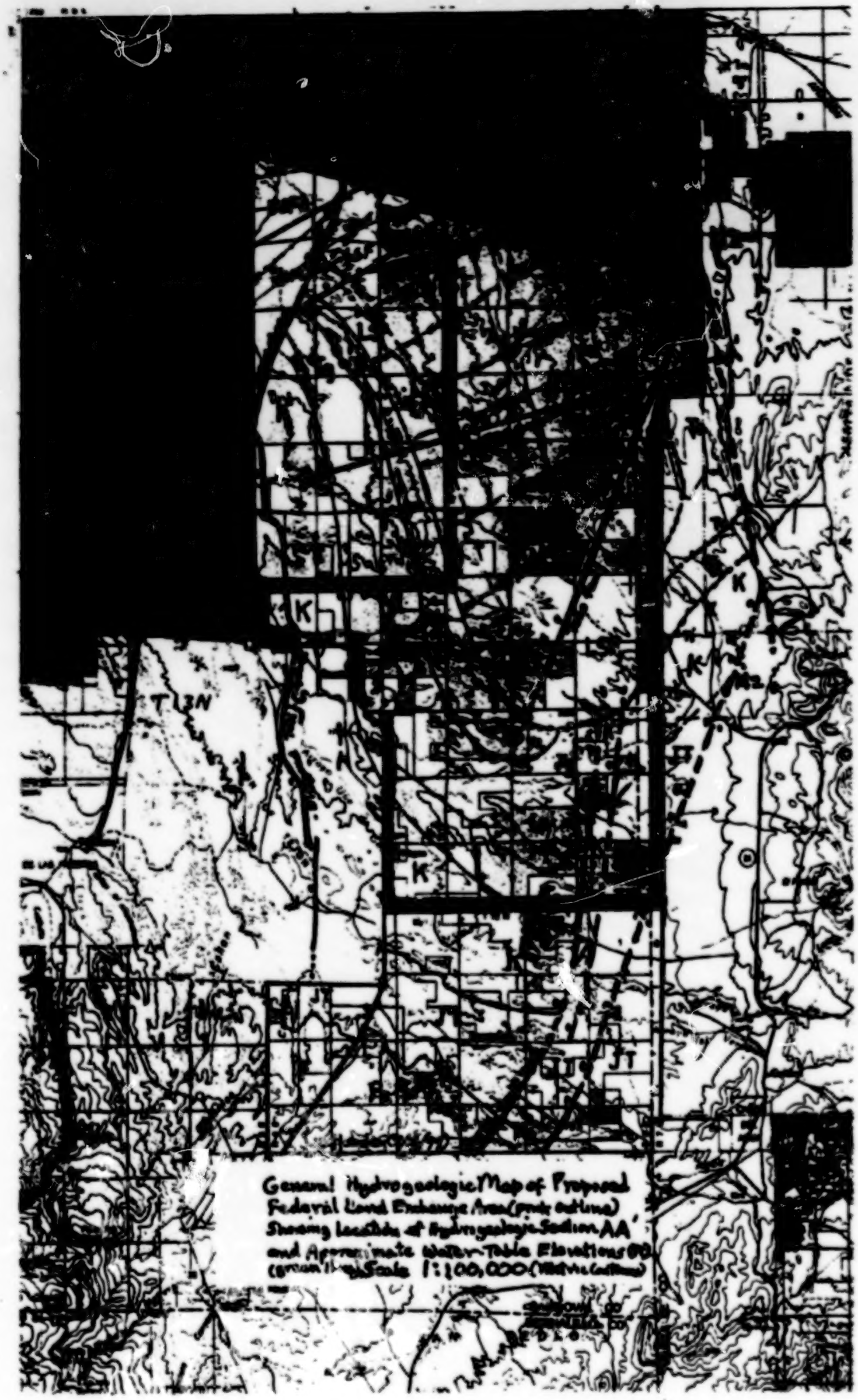
The major aquifer units in the area comprise basin fill deposits of the Upper Cenozoic Santa Fe Group. These sediments, and associated basaltic and rhyoltic volcanics, were emplaced during a long interval of earth-crustal extension (continuing to the present) that produced today's Basin and Range topography at the southern margin of the Southern Rocky Mountain province. This region includes the very deep (Rio Grande rift) structural depression between the Colorado Plateau and Great Plains provinces of north-central New Mexico. The Santa Domingo Basin and the Hagan Embayment-half graben (see map and cross section)form the northeastern extension of the Albuquerque Basin, which is the largest and deepest part of the rift-basin complex.
Early stages of the Rio Grande rift (RGR) extension in late Oligocene and early Miocene time (about 25 to 15 million years ago) are represented by partly indurated deposits of the Lower Santa Fe Group (LSF) hydrostratigraphic unit (Hawley and Haase, 1992; Hawley et al., 1995), that are characterized by fine to medium-grained textural groups (clays, silty sands, and interbedded sands and silty clays, with

92

local conglomeratic or gravelly zones; lithofacies assemblages 3, 4, 5, 7 on Table 1). Aquifer potential is low to moderate.

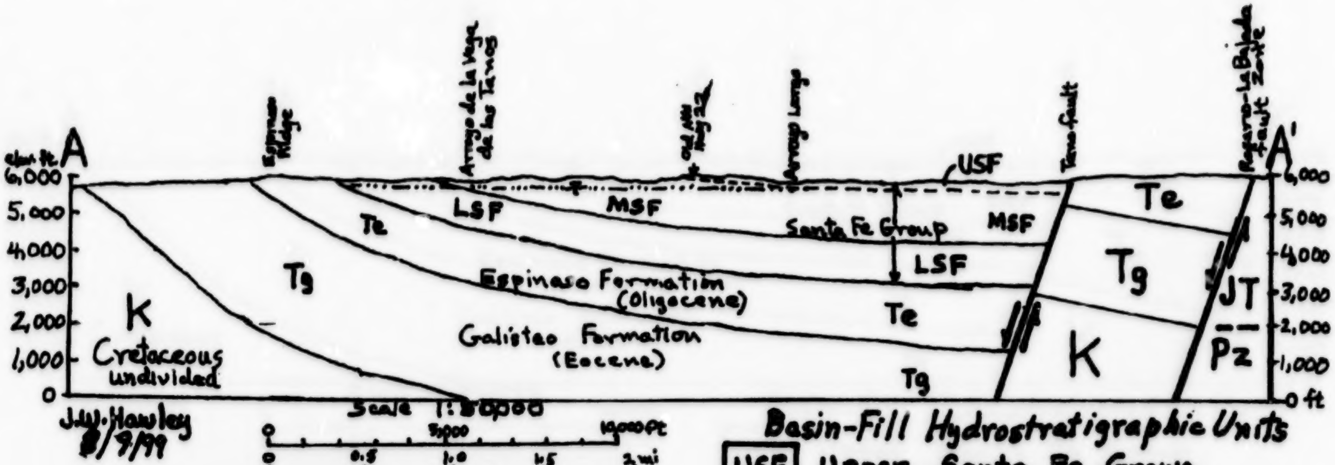
The main interval of RGR basin subsidence occurred between 7 to 15 million years ago (middle and late miocene time). The very thick basin fills deposited during this period were derived from emerging mountain highlands of the entire upper Rio Grande basin region. The Middle Santa Fe Group (MSF) hydrostratigraphic unit is generally coarser grained than the underlying LSF unit; but it is still partly indurated. Weakly cemented sandstones, siltstones, and conglomeratic sandstones and siltstones are major rocktypes; and soft sandy mudstones and silty clays are locally present. Dominant lithofacies assemblages (Table 1) are units 5, 6, 7, and 8. The MSF hydrostratigraphic unit correlates with the Tesuque Formation of the Espanola Basin and Santa Fe area, and it has a moderate to low aquifer potential (saturated horizontal hydraulic conductivities in 1 to 5 ft/day range). However, the saturated thickness of the MSF unit may locally range from 1,000 to 2,000 feet (see cross section). Transmissivity values, therefore, could be large and production of very deep wells could be potentially good (depending of course on quality of well design and construction). The most recent groundwater-flow model of the Albuquerque basin (Kernodle et al. 1995, plate 1.) assigns hydraulic conductivities of no more than 4 feet/day for the Santa Fe Group deposits in the Hagan embayment section of the Santo Domingo Basin.

Overlying Upper Santa Fe Group (USF) and younger stream-valley and basin-fill deposits are mostly in the unsaturated (vadose) zone, and they are only locally potential sources of groundwater production. Post-Santa Fe Group deposits are usually less than 100 feet thick and are not shown on the attached map and cross section.



General Hydrogeologic Map of Proposed Federal Land Exchange Area (pink outline) Showing Location of Hydrogeologic Section AA' and Approximate Water-Table Elevations (ft) (green lines) Scale 1:100,000 (Metric contours)

TA-



Bedrock Units (pre-Rio Grande rift basin-fill)

Te Espinaso Formation (not an aquifer)
Volcaniclastic and inter-bedded volcanic and intrusive igneous rocks

Tg Galisteo Formation (local aquifer)
Primarily sandstone and mudstone, and some conglomerate

Mesozoic Bedrock Units

K Upper Cretaceous Rocks-Undivided
Marine and non-marine shales and sandstones, with some coal beds

JT Jurassic and Triassic Rocks-Undivided
Primarily sandstones and mudstones, with some gypsum and limestone

Basin-Fill Hydrostratigraphic Units

USF Upper Santa Fe Group
(upper Miocene & Pliocene)

MSF Middle Santa Fe Group
(Miocene)

LSF Lower Santa Fe Group
(upper Oligocene-Lower Miocene)

—···⊤ Approximate water-table position
(near USF/MSF contact between Arroyo Largo and Tano faults)

Paleozoic Bedrock Units

Pz Permian Rocks-Undivided
Primarily sandstone, mudstone and limestone

Diagrammatic Hydrogeologic Section of Hagan Embayment Between Espinaso Ridge and the Cerrillos Uplift (Across Proposed Federal Land-Exchange Area in T.13-14N, R 6-7E, Sandoval and Santa Fe Counties, NM

BLE E-1

TABLE 1

Litho-facies	Ratio of Sand plus Gravel to Silt plus Clay[1]	Bedding Thickness (Meters)	Bedding Configuration[2]	Bedding Continuity (Meters)[3]	Bedding Connectivity[4]	Hydraulic Conductivity (K)[5]	Groundwater Production Potential
1	High	>1.5	Elongate to planar	>300	High	High	High
2	High to moderate	>1.5	Elongate to planar	>300	High to moderate	High to moderate	High to moderate
3	Moderate	>1.5	Planar	150 to 300	Moderate to high	Moderate	Moderate
4	Moderate to high	>1.5	Planar to elongate	30 to 150	Moderate to high	Moderate	Moderate
5	Moderate to high	0.3 to 1.5	Elongate to lobate	30 to 150	Moderate	Moderate to low	Moderate to low
5a	High to moderate	0.3 to 1.5	Elongate to lobate	30 to 150	Moderate	Moderate	Moderate
5b	Moderate	0.3 to 1.5	Lobate	30 to 150	Moderate to low	Moderate to low	Moderate to low
6	Moderate to low	0.3 to 1.5	Lobate to elongate	30 to 150	Moderate to low	Moderate to low	Moderate to low
6a	Moderate	0.3 to 1.5	Lobate to elongate	30 to 150	Moderate	Moderate to low	Moderate to low
6b	Moderate to low	0.3 to 1.5	Lobate	<30	Low to moderate	Low to moderate	Low
7	Moderate[*]	0.3 to 1.5	Elongate to lobate	30 to 150	Moderate	Low	Low
8	Moderate- to low[*]	>1.5	Lobate	<30	Low to moderate	Low	Low
9	Low	<0.3	Planar	>150	Low	Very low	Very low
10	Low	<0.3	Planar	>150	Low	Very low	Very low

[1] High >2;moderate 0.5; low <0.5

[2] Elongate (length to width ratios>5); planar (length to width rations 1-5); lobate (asymmetrical or incomplete planar beds).

[3] Measure of the lateral extent of an individual bed of given thickness and configuration.

[4] Estimate of the ease with which groundwater can flow between indivudual beds within a particular lighofacies. Generally, ghgh sand+gravel/silt+clay ratios, thick beds, and high bedding continuity favor high bedding connectivity. All other parameters being held equal, to greater the bedding connectivity, the greater the groundwater production potential of a sedimentary unit (Hawley and Haase, 1992, p. VI).

[5] High 10 to 30 m/day;moderate, 1 to 10 m/day; low, <1 m/day; very low, <0.1 m/day.

[*] Significant amounts of cementation of coarse-grained beds (as much as 30%)

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APPENDIX F

GLOSSARY OF TERMS

Alluvial deposits (Aluvium). A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material, deposited during comparatively recent geologic time by a stream or other body or running water.

Area of Critical Environmental Concern (ACEC). An area of public land where special management attention is needed to prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

basin. A depressed area with no surface outlet.

best management practices. Best management practices or BMPs means schedules of activities, prohibitions of certain practices, implementation of maintenance procedures, or other measures of practices approved by the New Mexico Environment Department or a designated management agency to prevent or reduce the pollution of waters of the State.

edge holdings. Land adjoining Special Management Areas.

escrow. Delivery of a document to a third party, in trust, to be delivered to the benefited party upon satisfaction or performance of certain specified conditions.

fee lands. (See **in fee simple**).

fee simple. Absolute ownership of real estate or real property.

in fee (simple). Refers to an estate in fee simple absolute; an unqualified freehold estate (unconditional ownership)

inholdings. Private or State-owned land inside the boundary of a Wilderness Study Area (or Special Management Area) but excluded from it.

intermountain plateau. A plateau that is partly or completely enclosed by mountains, and that is formed in association with them.

lithic scatter. Concentration of stone artifacts.

neotropical. Zoogeographical (the science of geographical distribution of animals) region which includes South and Central Americas, Mexico, and the West Indies.

patent reservation. A provision in a conveyance document excepting and retaining some rights, title, or interest in the lands conveyed, which were not previously reserved or granted but which are required or authorized by law to be retained.

physiography (physical geography). The study of the genesis and evolution of land forms.

precambrian. All geologic time, and its corresponding rocks, before the beginning of the Paleozoic; it is equivalent ot about 90% of geologic time.

pyroclastic. Pertaining to clastic rock material formed by volcanic explosion or airial expulsion from a volcanic vent.

pyroclastics. A general term for a deposit of pyroclasts.

restrictive covenant. (Legal term)--a private agreement, usually in a deed or lease, that restricts the use and occupancy of real property, especially by specifying lot size, building lines, etc., and the uses to which the property may be put.

Special Management Areas (SMA). Areas requiring special management by BLM to protect one or more resources values; it may include non-public lands that BLM wishes to acquire or to bring under a Cooperative Management Agreement to better manage the valued resource. Activity plans are prepared for SMAs; the SMAs may be given designations under various existing labels such as "Area of Critical Environmental Concern" or "Research Natural Area." These areas are not necessarily "locked up" from development if the development activity does not conflict with the goals for the area.

species, endangered. Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of the Act would present an overwhelming and overriding risk to man.

species, proposed. Any species of fish, wildlife or plant that is proposed in the Federal Register to be listed under Section 4 of the Endangered Species Act.

species, candidate. Any species being considered for possible addition to the list of Endangered and Threatened Species. These are taxa for which the Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposal rule is currently precluded by higher priority listing actions.

species of concern. Any species for which current information indicates to the Fish and Wildlife Service that proposing to list the species as Endngered or Threatened is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known. Species of Concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a Endangered or Threatened species.

Wilderness Study Area (WSA); a roadless area or island that has been inventoried and found to have wilderness characteristics as described in Section 603 of FLPMA and Section 2(c) or the Wilderness Act of 1964 (78 Stat. 891).

species, threatened. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

stratigraphy. The study of the formation, composition, sequence, and correlation aof the stratified rocks as part of the earth's crust.

"subject to" clause. Clause in a conveyance identifying those rights uses, and interests in the lands being conveyed which are outstanding in third parties.

subsurface right. A landowner's right to the minerals and water below his or her property.

surface estate. Surface rights--all rights in the land excepting oil, gas, and mineral rights to underground deposits.

tertiary. The first period of the Cenozoic era, thought to have covered the span of time between 65 and 3 to 2 million years ago.

trust land. Property held by the United States in trust for an Indian Tribe or individual Indian.

APPENDIX G

MAILING LIST

Mike Aaron
Charles Aguilar
Pete Aguilar
Lynn & Rick Allen
Elizabeth Andrews
Beverly Antaeus
Carolyn Appelman
Antonio & Jose Archuleta
Bernadino Armijo
Robert J. Armijo
Rudolpho & Joe Armijo Jr.
Michael A. Atler
Joe Baca
Alfredo L. Baca
Ty Balknap
Edmund F. Ball
Jon Barela
Senator Jeff Bingaman
Gilbert Borrego
Nancy Brantley
Gwen Brewer
Jean Brocklebank
Jay D. Burkett
Brian G. Burnett
Lyle Burrington
Cecil Carnes
Eva Castillo
Steve Cather
Phillip Chappell
Lawrence & Lolo Chavez
Ralph Chavez
Anna Chavez-Montano
Michele Chisholm
A. Coleman
Enid Cresson
Dave Daupert
Jim Dick
Senator Pete Domenici
Leanne Duree
Starley & Elisa Duwyenie
Mark Edwards
Graig Felner
Betn Fries
Beatriz A. Galaviz
N. Gallegos
Melisandro & R. Garcia
John George
David Gomez
Moises Gonsalez
Eutimio Gonzales
Ruben Gonzales
Skipper Good
Sid Goodloe
Catherine Gradi
Fred Gross
Art Gurule
Lee Halterman
Stephanie Ham
Steve Harris
Manuel E. Herrera
Richard J. Herrera
John Horning
Shannon A. Horst
Richard Hughes
Rick Hurley
Mary A. Jaramillo
Andy Johnson
Gary Johnson
John Kennedy
David Hugh Kincaid
Virginia Kinney
Jerry Knepper
Barbara Levin
Carolyn Loder
Lorraine Lucero
Connie Martinez
Joe M. Mathews
Norma McCallan
John F. McCarthy
Steve McDowell
Peter Metzner
Harriet Hope Miner
Joseph Montano
Hilario P Montano Jr.
Danny Montano
Antonio A. Montano
Michael Montano
Louis D. Montano
Samuel P. Montano
Joseph & Cleofas Montano
Manuel E. Montano
Eloisa Montano-Fernandez
Rita Montano-Garcia
Orville Moore
Joe & Catre Moya
Ben Neary
Frances Newson
Frank B. Nordstrom
Duncan Osborne
Carlos Padilla
Flora Padilla
Carol M. Parker
Fred Parker
Van Perkins
Tom Petencin
Roger Peterson
Mike Pope
Susan Protiva
Rob Roberts
Pueblo of San Felipe
Pueblo of Santa Ana
Pueblo of Santo Domingo
Joseph J. Quintana
Shawn Redfield
Dennis Rowley
Bud Ryan
Ernestine E. Salazar
John P. Salazar
Sanford D. Schemnitz
Laurie Sedlmayr
R.V. Seligman
Jack Seligman
Julie & Milton Seligman
Milton S. Seligman
Barbara Seward
Buddy D. Shaw
George C. Sherman
Yvonne Smith
Harry Stewart
Geoffrey Stewart
Rachel Thomas
Steven Thompson
Willie Trujillo
Larry B. Trujillo
Jay P. Urwitz
Sil Verde
William Waldman
David Watkins
Marvin Lee Watts
John H. Wenger
Bob Wessely
Phillip Stephen West
Charles Williams
Congresswoman
  Heather Wilson
Canon de Aqua Community
City of Albuquerque
Cortez Pipeline Company
Embudo Valley Library
Gas Company of NM
L. Dreyfus Natural Gas
Linda Talley Branch
Merrion O&G Corp.
Mid-America Pipeline Co.
NM State Highway Dept.
NIC Zamier Inc.
Plains Electric G&T Coop
Sandoval County Manager
Santo Domingo Land Committee

APPENDIX H

SAN FELIPE LAND EXCHANGE

NMNM 101522

SELECTED LANDS - LEGAL LAND DESCRIPTION

NEW MEXICO PRINCIPAL MERIDIAN

T. 13 N., R. 6 E.,	**ACRES**
sec. 1, lots 8	33.29
9	39.29
10	38.73
11	39.04
12	33.58
14	11.81
	195.74
sec. 3, lots 1	39.70
2	39.76
3	39.80
4	39.86
S½N½,	160.00
E½SE¼,	80.00
W½SW¼;	80.00
	479.12
sec. 7, SE¼SW¼;	**40.00**
sec. 8, E½;	**320.00**
sec. 9, all;	**640.00**
sec. 10, all;	**640.00**
sec. 14, N½,	320.00
SW¼;	160.00
	480.00
sec. 15, all;	**640.00**
sec. 16, S½NW¼;	**80.00**
sec. 17, S½NE¼;	**80.00**
sec. 21, lots 10	27.88
11	36.58
12	37.34
13	27.88
NE¼NE¼,	40.00
NE¼SE¼;	40.00
	209.68
sec. 22, N½,	320.00
N½S½;	160.00
	480.00
sec. 23, W½W½;	**160.00**

sec. 25, NW¼,	160.00
W½SW¼.	80.00
	240.00
sec. 26, S½;	**320.00**
sec. 27, S½NE¼,	80.00
W½SW¼,	80.00
SE¼SW¼,	40.00
E½SE¼,	80.00
SW¼SE¼;	40.00
	320.00
sec. 28, lots 1	13.18
2	13.12
3	13.08
4	13.02
5	26.63
6	36.15
7	36.15
8	26.68
9	26.73
E½;	320.00
	524.74
sec. 34, E½;	**320.00**
sec. 35, N½,	320.00
W½SW¼;	80.00
	400.00
sec. 36, SW¼NW¼,	40.00
W½SW¼.	80.00
	120.00

T. 14 N., R. 6 E.,

sec. 22, lots 2	36.01
3	39.25
4	10.41
7	22.58
8	39.32
9	39.39
10	36.67
W½;	320.00
	543.63
sec. 23, lot 5;	**3.26**

sec. 26, lots 3	27.29
4	40.34
5	14.78
10	30.38
11	40.29
12	40.24
13	40.36
14	3.59
	237.27
sec. 27, N½,	320.00
NE¼SW¼,	40.00
N½NW¼SW¼,	20.00
NE¼SE¼NW¼SW¼,	2.50
NW¼SW¼NW¼SW¼,	2.50
S½S½NW¼SW¼,	10.00
S½SW¼,	80.00
SE¼;	160.00
	635.00
sec. 34, N½;	**320.00**
sec. 35, lots 3	8.95
4	15.80
9	29.42
10	43.30
W½.	320.00
	417.47
T. 13 N., R. 7 E.,	
sec. 6, lot 13	**00.19**
sec. 7, lots 8,	49.72
9,	40.23
10,	10.92
12,	23.30
13;	40.20
	164.37
sec. 18, lots 1	23.62
2	23.68
3	23.72
W½NW¼,	80.00
NW¼SW¼;	40.00
	191.02
sec. 31, lots 1	24.27
2	24.33
3	24.39
4	24.45
W½W½.	
	160.00
	257.44

TOTAL ACREAGE 9,459.03
(Sandoval & Santa Fe Counties)

ALTERNATIVE B

SAN FELIPE/BLM LAND EXCHANGE - FEDERAL LANDS
NMNM 101522

LEGAL LAND DESCRIPTION

NEW MEXICO PRINCIPAL MERIDIAN

T. 12 N., R. 6 E.,	**ACRES**
sec. 7, lots 3	14.50
4	14.13
5	39.08
6	39.08
	106.79
sec. 10, E½NE¼NE¼,	20.00
W½SW¼NE¼,	20.00
S½NW¼,	80.00
N½SW¼,	80.00
SE¼SW¼,	40.00
W½SE¼;	80.00
	320.00
sec. 11, NW¼NW¼;	**40.00**
sec. 17, N½N½,	160.00
SE¼NE¼,	40.00
NE¼SE¼;	40.00
	240.00
sec. 18, NE¼;	**160.00**
sec. 21, N½NE¼,	80.00
SE¼NE¼;	40.00
	120.00
sec. 22, lots 1	32.58
2	32.56
3	32.56
4	32.54
S½N½,	160.00
NW¼NW¼;	40.00
	330.24
sec. 23, lots 1	32.69
2	32.65
3	32.63
4	32.59
	130.46

Total Acreage - 1,447.49

APPENDIX I

SELECTED LAND RESERVATIONS (BLM/San Felipe Exchange)

EXCEPTING AND RESERVING TO THE UNITED STATES:

1. A right-of-way thereon for ditches or canals constructed by the authority of the United States pursuant to the Act of August 30, 1890 (43 U.S.C. 945);

2. An easement and right-of-way over, across, and upon a strip of land 40 feet wide along the existing road crossing lots 1 to 4, sec. 3, T. 13 N., R. 6 E., as shown on the official Bureau of Land Management status records for the State of New Mexico, and further identified in case file NMNM 95818, for the full use as a road by the United States for public purposes.

3. A right providing that prior to any surface disturbance or any other activity on the lands conveyed hereby having the potential to affect historic properties on such lands, Grantee shall obtain express written approval from the Bureau of Indian Affairs indicating that effects on historic properties have been taken into account consistent with the provisions of the National Historic Preservation Act, (P.L. 89-665; 80 Stat. 915; 16 U.S.C. 470; as amended), and shall comply fully with the provisions of such Act; but the Bureau of Indian Affairs may extinguish this proviso for all or any portion of the lands conveyed hereby upon determination that provisions of the Act have been fully satisfied, and furthermore this proviso shall expire with respect to any of the lands conveyed hereby, as of the date such lands are conveyed to the United States in trust for the benefit of the Grantee.

4. Those rights for a power line granted to Public Service Company of New Mexico, its successors or assigns, by right-of-way NMNM 036231, pursuant to the Act of March 4, 1911, as amended (43 U.S.C. 961), as to lot 7, S2NW, NWSW, sec. 13, E2SE, SWSE, sec. 14, a portion within the E2SE, SWSE, SESW, sec. 22, N2NW, SWNW, NWNE, sec. 27, T. 14 N., R. 6 E.;

5. Those rights for a powerline granted to Public Service Company of New Mexico, its successors or assigns, by right-of-way NMNM 30521, pursuant to the Act of October 21, 1976 (43 U.S.C. 1761), as to a portion of the NESE, S2SE, sec. 22, and N2NW, SWNW, sec. 27, T. 14 N., R. 6 E.

SUBJECT TO:

1. Valid existing rights-of-way and easements;

2. Those rights for a powerline granted to Plains Electric Generation and Transmission Cooperative, Incorporated, its successors or assigns, by right-of-way NMNM 9456, pursuant to the Act of March 4, 1911, as amended (43 U.S.C. 961), as to the NESE, sec. 21, N2SW, SESW, SWSE, sec. 26, S2NE, sec. 27, N2NE, sec. 35, SWNW, sec. 36, T. 13 N., R. 6 E.;

3. Those rights for a road which is claimed by the New Mexico State Highway Department, or its assigns, pursuant to Rev. Stat. 2477 (43 U.S.C. 932), and assigned Bureau of Land Management Serial No. NMNM 57898 for identification, as to the SE, sec. 1, T. 13 N., R. 6 E., lots 12, 13, S2SW, sec. 10, W2NE, E2NW, W2SE, sec. 15, N2NE, SENE, E2SE, sec. 22, SWSW, sec. 23, N2NW, SENW, SESW, W2SE, sec. 26, E2, sec. 35, T. 14 N., R. 6 E., and SWSW, sec. 6, lots 2, 3, W2NW, sec. 7, T. 13 N., R. 7 E.;

4. Those rights for an anchor easement granted to Plains Electric Generation and Transmission Cooperative, Incorporated, its successors or assigns, by right-of-way NMNM 57917, pursuant to the Act of October 21, 1976 (43 U.S.C. 1761), as to the SENE, sec. 27, T. 13 N., R. 6 E.;

5. Those restrictive covenants contained in Declaration of Restrictive Covenants document recorded on ___________,2000.

DECLARATION OF RESTRICTIVE COVENANTS
FOR THE SAN FELIPE EXCHANGE
SANDOVAL AND SANTA FE COUNTIES, NEW MEXICO

WHEREAS, the United States is the owner of all of the following described real property located mainly in Sandoval County and partly in Santa Fe County, New Mexico, hereinafter known as the San Felipe Exchange Lands ("Exchange Lands"). A legal description of the Exchange Lands is attached as Ex. 1; and,

WHEREAS, the San Felipe Exchange Lands are the subject of a land exchange between the United States and the Pueblo of San Felipe ("the Pueblo") authorized by Section 206 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1717, and the Record of Decision issued by the U.S. Department of Interior, Bureau of Land Management dated __________ 2000; and,

WHEREAS, the United States shall remain in possession of lands known as the Ball Ranch Area of Critical Environmental Concern ("the ACEC", a legal description of which is attached as Ex. 2) that are adjacent to the Exchange Lands; and,

WHEREAS, the Pueblo intends to preserve the Exchange Lands in perpetuity and manage the lands to protect their outstanding scenic, natural resource, cultural and historic values; and,

WHEREAS, United States, for the benefit of the people of the United States and the Pueblo of San Felipe, desires to place the following restrictive covenants upon the Exchange Lands limiting the use and occupancy thereof upon the conveyance of the lands to the Pueblo:

ARTICLE I
Hazardous Materials and Dumping

The storage, dumping or other disposal of toxic or hazardous materials or of non-compostable refuse is prohibited.

ARTICLE 11
Mining and Mineral Extraction; Gathering of Native Plants

Any exploration or drilling for, or excavation, mining, or extraction of, any metal, hydrocarbon, oil or gas, mineral, soil, sand, gravel or rock on or below the surface of the Exchange Lands is prohibited. Nothing in the foregoing, however, shall preclude the Pueblo and its members from taking clay, soils, minerals or native plants from any of the Exchange Lands for traditional uses.

ARTICLE III
Subdivision and Development of Land

The subdivision of the Exchange Lands for residential or commercial development is prohibited. With the exception of stock tanks, wells, windmills, utility lines, hay shelters, line camps or administrative sites as may be needed to facilitate the Pueblo's livestock grazing operations; the construction or placement of any signs, billboards and other advertising medium, utility towers, and communications towers, is prohibited.

ARTICLE IV
Water Rights

The conveyance of surface and ground water rights by any party subject to the terms of these covenants from on or below the Exchange Lands is prohibited.

ARTICLE V
General Provisions

1. The U.S. Bureau of Land Management shall hold these Restrictive Covenants for the United States. The U.S. Bureau of Indian Affairs shall enforce these covenants at the direction of the Secretary of Interior or his designee on behalf of the United States.

2. Nothing herein shall be construed to grant to any member of the public any access or right if access to any portion. of the lands conveyed herein, or as authorizing the United States to grant any such right of access to any third person without the express prior written consent of the Pueblo.

3. These Restrictive Covenants shall be construed under applicable law in the jurisdiction to effectuate their purposes of conserving important wildlife habitat, and open space; to promote the sustainable use of minerals, water, native plants, wildlife, and other natural resources for the traditional use of San Felipe Pueblo tribal members; and, to protect the Exchange Lands in their present, substantially undisturbed natural state, with significant topological, historic, and cultural resource values preserved in perpetuity, but without interfering with any uses of the Exchange Lands by the Pueblo for any Purposes consistent with the preservation of the lands' conservation values.

ARTICLE VI
Perpetual Nature and Enforcement of the Covenants

1. The provisions contained in the Restrictive Covenants shall run with and bind the Exchange Lands in perpetuity as a burden on the land and shall benefit, and be enforceable by, the United States by and through the Department of Interior, or by its successors and assigns. The Pueblo and its successors, assigns and all others acquiring an interest in the Exchange Lands shall agree and covenant to comply with the Restrictive Covenants as stated herein.

2. The United States may enforce these Restrictive Covenants against the Pueblo pursuant to its authority under its trust relationship with the Pueblo. The Pueblo's successors and assigns may be subject to legal actions by the United States or any other person holding an interest seeking relief under law or equity for violations of these Restrictive Covenants. The United States reserves the right to enter the exchange lands upon ten (10) days written notice to the San Felipe Pueblo Governor's Office, P.0. Box A, San Felipe Pueblo, New Mexico 87001 and with the written consent of the Pueblo or its successors or assigns to monitor compliance with these Restrictive Covenants. The representative of the United States shall be accompanied by one or more duly authorized representatives from the Pueblo. The documentation complied by the U. S. Bureau of Land Management for preparation of the Final Environmental Impact Statement for the San Felipe Exchange shall serve as the baseline documentation of the condition. of the Exchange Lands for purposes of determining compliance with these covenants.

3. These Restrictive Covenants may be amended by agreement of the United States and the Pueblo or their successors and assigns, so long as any amendments made shall not impair the conservation values that the covenants are intended to protect.

4. Any failure by the United States, or by any other party burdened or benefitted by these Restrictive Covenants, to enforce any restriction, condition, covenant, or agreement herein contained shall not be deemed a waiver of the right to do so thereafter as to the same breach or as to one occurring prior to or subsequent thereto.

5. The invalidation of any the terms of the Restrictive Covenants shall in no way affect the remaining provisions, which shall remain in full force and effect.

108

IN WITNESS WHEREOF, the United States and the Pueblo have set their hands on the_____day of__________,2001.

For the United States:

___________________________________Bureau of Land Management

___________ _______________________Bureau of Indian Affairs

For the Pueblo of San Felipe:

___________________________________Governor

STATE OF NEW MEXICO)
)ss
COUNTY OF SANDOVAL)

The foregoing instrument was acknowledged before me on the______day of ________,2001 by the above named individuals.

____
Notary Public

My commission expires:__________________ _____

STATE OF NEW MEXICO)
)ss
COUNTY OF SANDOVAL)

FILED FOR RECORD at________, on_________________________ 2001,

Recorded on________________, 2001 in Vol._____, Page______________,

County Clerk, by________________________________.

APPENDIX J

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END

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